

AUDIO-VIDEO STEREO RECEIVER

KENWOOD

# KR-V8040/V8540

## SERVICE MANUAL

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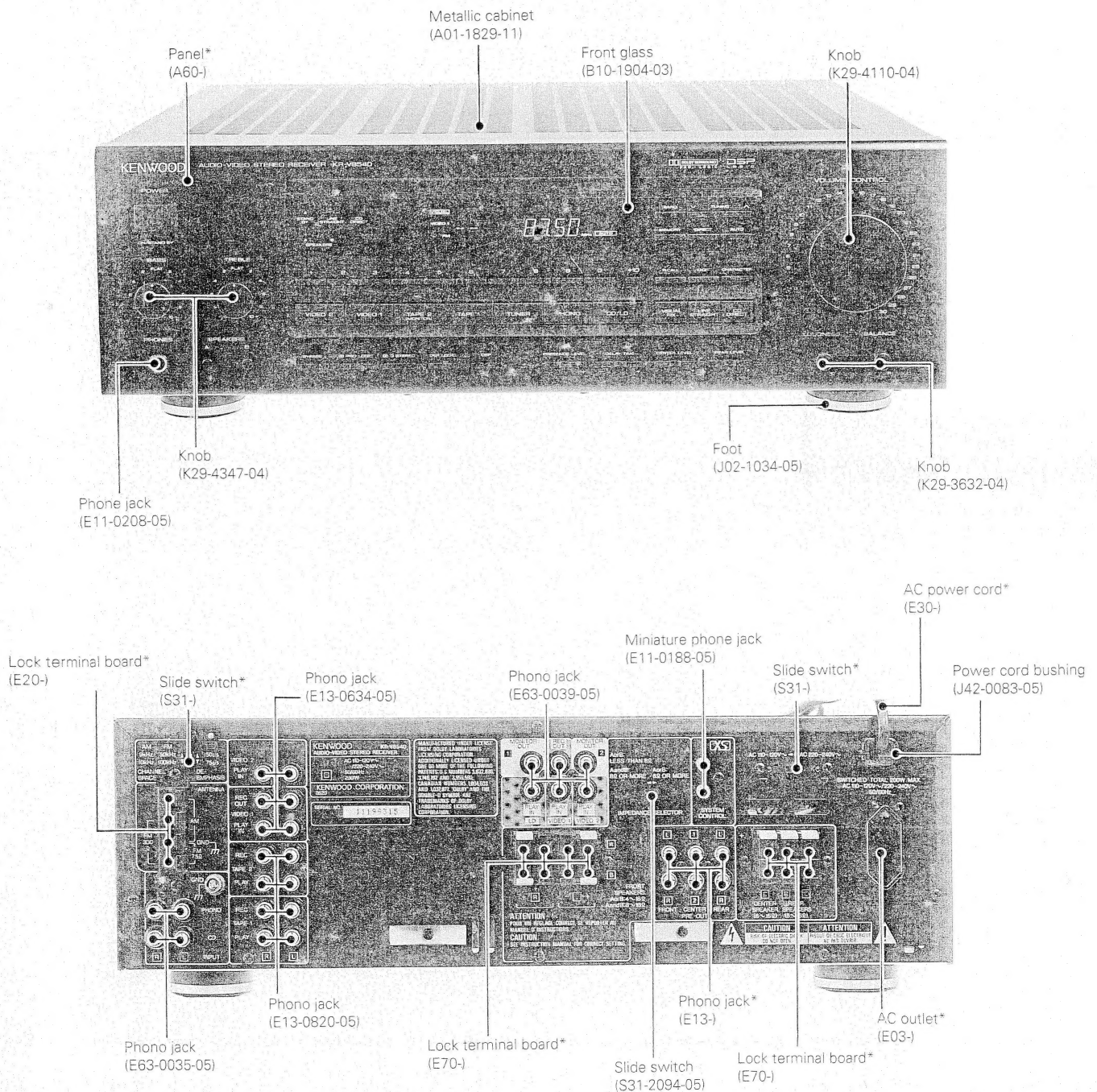


Photo is KR-V8540.  
\*Refer to parts list on page 67.

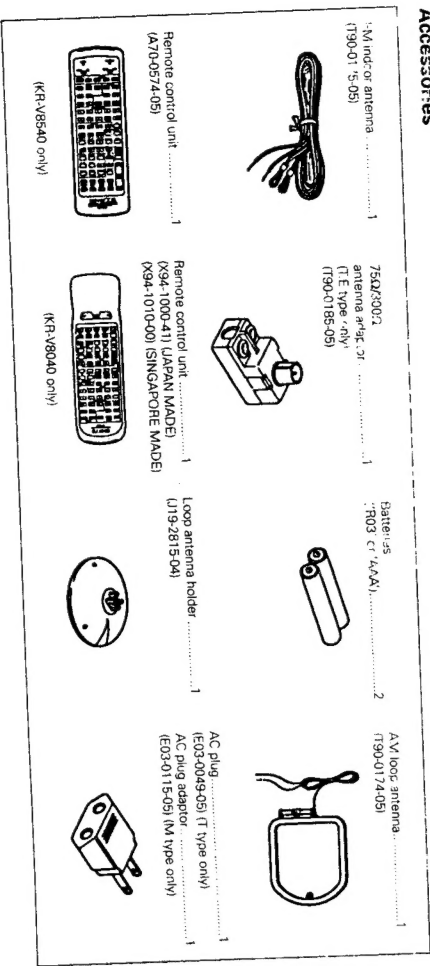
# R-V8040/V8540

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### ACCESSORIES



# KR-V8040/V8540

## CAUTION/CONTROLS AND INDICATORS

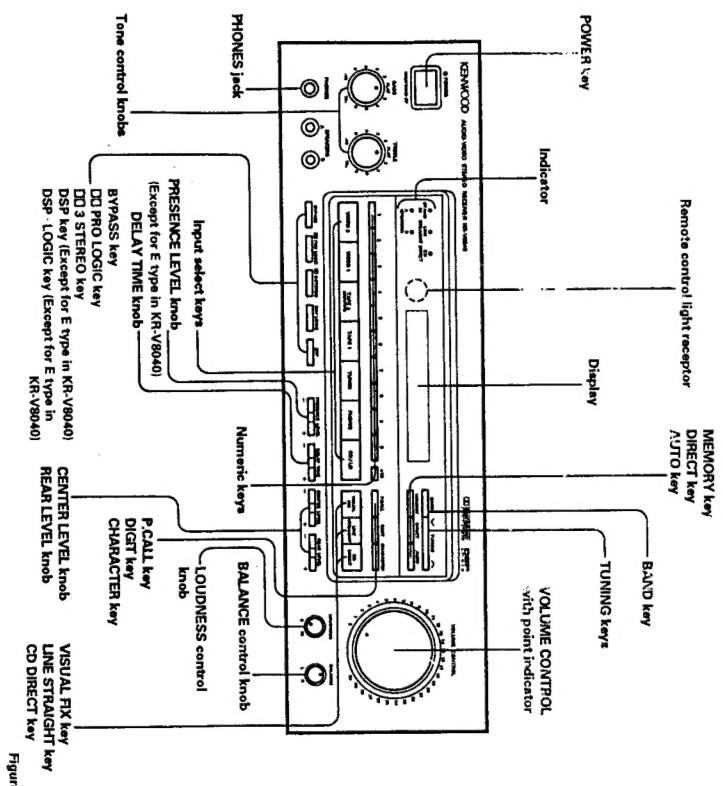
### Caution

This manual is available 2 models, KR-V8040 and KR-V8540. When using this manual, please check model's name.

The KR-V8040 and KR-V8540 are made in different countries. However, their circuits are identical.

MODEL NAME	ABB.	JAPAN MADE			SINGAPORE MADE		
		AUDIO UNIT	BUFFER UNIT	DISPLAY UNIT	AUDIO UNIT	BUFFER UNIT	DISPLAY UNIT
KR-V8040	K	X09-3550-11	X13-6970-11	X14-3400-10	X09-3580-11	X13-7050-11	X14-3400-11
	P	1-02	0-11	0-10	1-02	0-11	0-11
	Y	2-92	2-92	0-21	2-92	2-92	0-22
	M	0-22	2-92	0-21	0-22	2-92	0-22
KR-V8540	E	2-71	2-71	2-71	2-71	2-71	2-72
	T	0-51	2-71	0-51	0-51	2-71	0-52
	K	X09-3550-10	X13-6970-10	X14-3400-10	X09-3580-10	X13-7050-10	X14-3400-10
	P	1-01	0-10	0-10	1-01	0-10	0-11
	Y	2-91	2-91	0-21	2-91	2-91	0-22
	M	0-21	2-91	0-21	0-21	2-91	0-22

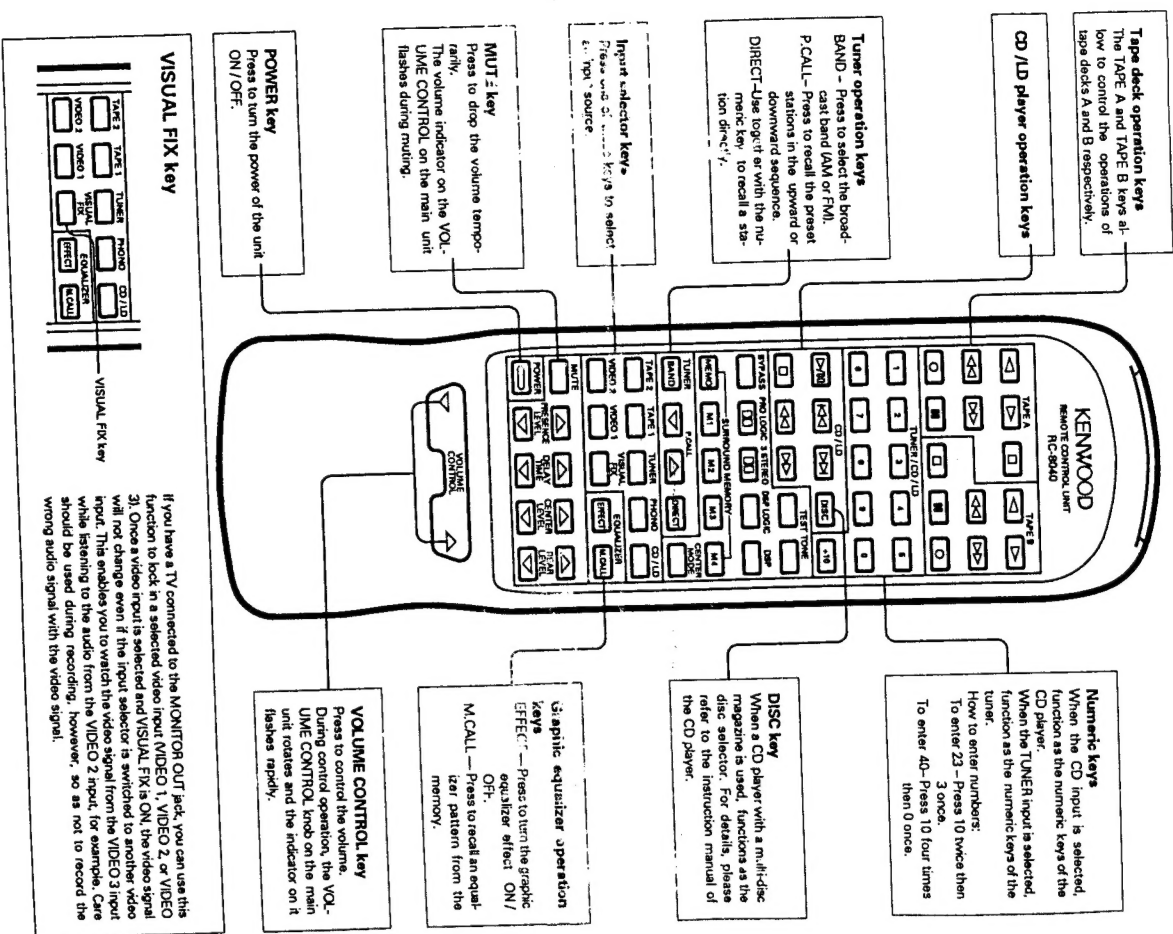
### Controls and indicators



# R-V8040/V8540

## REMOTE CONTROL OPERATION

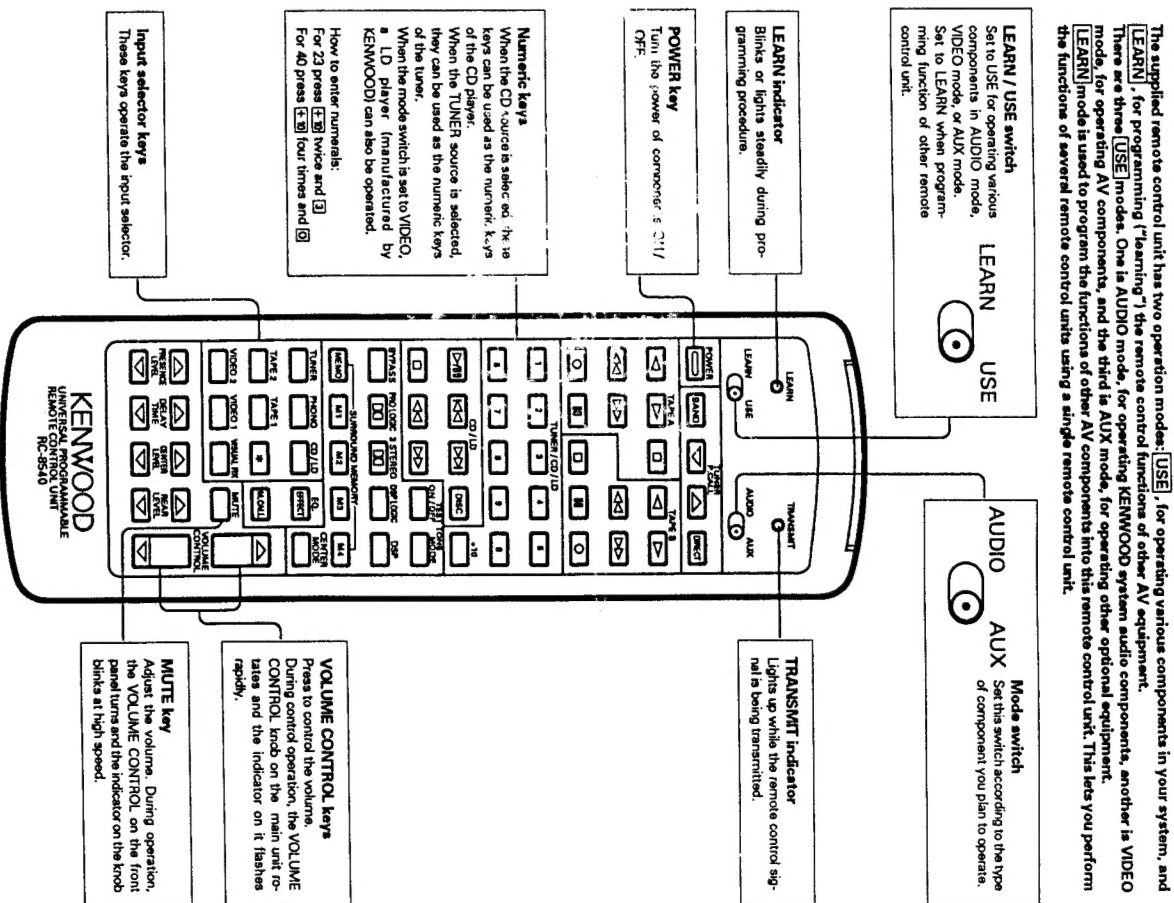
For KR-V8040



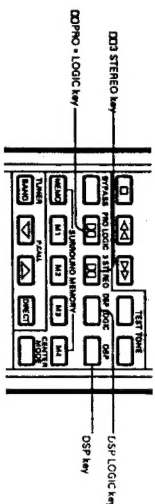
# KR-V8040/V8540

## REMOTE CONTROL OPERATION

For KR-V8540

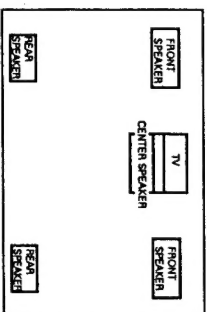


## ① Presence

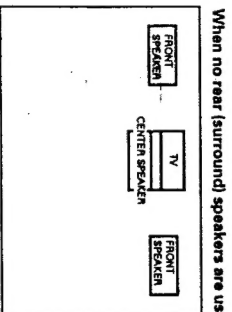


### ■ Speaker positioning

#### Standard layout

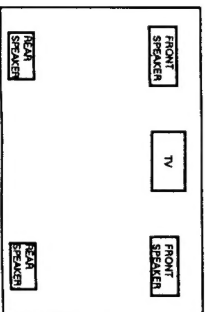


- ① **Dolby PRO LOGIC mode**  
Set the center mode according to the size of the center speaker.  
**NORMAL** : When the center speaker size is small.  
**WIDE BAND** : When the center speaker size is large or medium.
- ② **DSP Logic mode**  
Set the center mode to "4 CH MODE".



- Dolby 3 STEREO mode**  
Set the center mode according to the center speaker size.  
**NORMAL** : when using a small center speaker.  
**WIDE BAND** : when using a medium-sized or large center speaker.

#### When no center speaker is used



- ① **Dolby PRO LOGIC mode**  
Set the center mode to PHANTOM.  
② **DSP mode**  
Select the desired presence mode.  
③ **DSP Logic mode**  
Set the center mode to "3 CH MODE" and select the desired presence mode.

## ② Operation of Dolby PRO LOGIC

### ■ Dolby PRO LOGIC field adjustment

- 1 Set the Dolby PRO LOGIC mode.**  
Press the **DOLBY PRO LOGIC** key. Lights up.
- 2 Select the center mode.**  
Press the **MODE** key. The center mode is switched. Refer to column "Center mode" below.  
Every time the key is pressed, the center mode is switched.  
NORMAL → WIDE BAND → PHANTOM
- 3 Turn on the test tone.**  
Press the **TEST TONE** key. Remote control use only.
- 4 Adjust the volume balance.**  
Press the **MODE** key.  
The speaker generating the noisy test tone is changed every time the key is pressed.  
In NORMAL or WIDE mode:  
Left → Center → Right → Rear  
In PHANTOM mode:  
Left → Right → Rear  
Every time the key is pressed, the center mode is switched.
- 5 Stop generating the test tone.**  
Press the **TEST TONE** key. Remote control use only.
- 6 Set the delay time.**  
Press the **DELAY TIME** key. Main unit.  
Calculate the proper delay time for Dolby Surround by referring to the following table.  
The delay time can be adjusted in the range from 15 to 30 ms.  
Once a delay time is set, it is automatically held in memory so the same delay time is displayed when over Dolby Surround is switched ON later.  
Delay time (ms) = 20 ms × 3 (A - B)  
A : Distance of front speaker (m)  
B : Distance of rear speaker (m)

#### Center mode

- Select one of the following center modes according to the type of the presence speakers in your system.
- NORMAL** : Use this mode with a center speaker of a compact size.  
**WIDE BAND** : Use this mode with a center speaker of a medium or larger size.  
● If you cannot identify whether your center speaker is of the medium or compact size, try both the NORMAL and WIDE mode and use the one that can provide better sound positioning.  
**PHANTOM** : Use this mode when the center speaker is not used.  
● Even without the center speaker, the signal is processed in a simulated manner to ensure proper center image positioning and provide the enjoyment of Dolby Surround.



### ③ Operation of Dolby 3 STEREO

The Dolby 3 Stereo mode uses an additional center speaker to improve the positioning of words, etc., when playing video software such as a movie in your home.

#### ■ Dolby 3 STEREO adjustment

- 1 Set the Dolby 3 STEREO mode.**
- 2 Select the center mode.**  
 Every time the key is pressed, the center mode is switched.  
 NORMAL,  $\pm$  WIDE  
 • Set the center mode to NORMAL if using a small center speaker, or set to WIDE if using a medium-sized or larger speaker.
- 3 Turn on the test tone.**
- 4 Adjust the center speaker volume.**  
 ① Press the MODE key.  
  
 ② Adjust the volume.  
 • The speaker generating the test tone is changed every time the MODE key is pressed.  
 • Repeat steps ① and ②, and adjust so that the level of the center speaker is equal to that of the left and right speakers.  
 • The rear level adjustment is invalid.
- 5 Stop generating the test tone.**  
 Press the key again.

#### ■ Dolby 3 STEREO playback

- 1 Set the Dolby 3 STEREO mode.**
- 2 Select the center mode.**  
 Every time the key is pressed, the center mode is switched.  
 NORMAL,  $\pm$  WIDE  
 • Set the center mode to NORMAL if using a small center speaker, or set to WIDE if using a medium-sized or larger speaker.
- 3 Play a stereo software program or a Dolby surround program.**
- 4 Adjust the volume and tone.**

**To return to normal stereo playback**

Press of

Main unit

### ④ Operation of DSP/DSP Logic

The DSP (Digital Signal Processor) allows to reproduce the atmosphere of various sound fields. By applying additional adjustments, a custom presence effect of yourself can also be created.

① DSP presence mode ..... ARENA, JAZZ CLUB, STADIUM, DISCOTHEQUE  
 ② DSP Logic presence mode ..... LARGE THEATER, SMALL THEATER

Satisfactory effect can be enjoyed by selecting one of the presence modes by referring to the table below. Additionally, the parameters shown in the table can also be adjusted according to your liking.

Presence level : Variable in the range from -20 to 0 dB.  
 Delay time : Variable in the range from 1 to 50 ms.  
 Rear level : Variable in the range from -40 to 0 dB.  
 Center level : Variable in the range from -40 to 0 dB.

	Initial setting values				Variable setting values	
	Channel mode	Delay time	Presence level	Center level	Rear level	Center level
Presence mode						
Arena	*	10 ms	-12 dB	*	-10 dB	-40 dB -0 dB
Jazz club	*	15 ms	-12 dB	*	-10 dB	-40 dB -0 dB
Stadium	*	25 ms	-8 dB	*	-10 dB	-40 dB -0 dB
Discotheque	*	16 ms	-8 dB	*	-10 dB	-40 dB -0 dB
Large theater	3ch	30 ms	-8 dB	*	-10 dB	-40 dB -0 dB
	4ch	30 ms	-8 dB	-10 dB	-10 dB	-40 dB -0 dB
Small theater	3ch	15 ms	-16 dB	*	-10 dB	-40 dB -0 dB
	4ch	15 ms	-16 dB	-10 dB	-10 dB	-40 dB -0 dB

ARENA ..... A hall where high frequencies are reflected very well and reverberations are long.

JAZZ CLUB ..... A live house of jazz where gymbals sounds well.

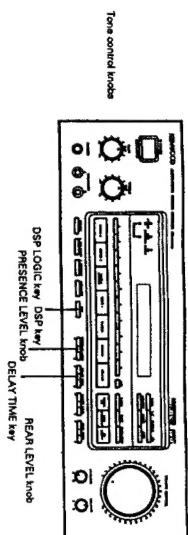
STADIUM ..... A stadium with reflections proper to PA speakers.

DISCOTHEQUE ..... A disco where medium-frequency range is enhanced by comfortable reverberations and graphic equalizer effects.

LARGE THEATER ..... Reproduces a surround sound proper to a large movie theater.

SMALL THEATER ..... Reproduces the sound field of a small movie theater or hall.

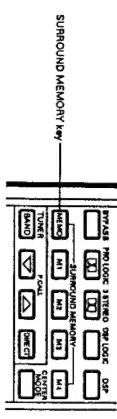
## ⑤ Creating a DSP sound field



- 1 Select the presence mode.**  
 Main unit or Remote control unit  
 Each press switches over the modes.  
 ARENA → JAZZ CLUB → DISCOTHEQUE → STADIUM → LARGE THEATER → SMALL THEATER  
 (Hand icon pointing to the 'DSP LOGIC' button)
- 2 Play the music source.**  
 Now, a sufficient sound field effect of the presence mode can be obtained. However, you can make additional adjustments as described in the following.  
 • Even when the following presence parameters have been adjusted, they will return to the initial settings when the Dolby Surround mode or another presence mode is selected.
- 3 Adjust the presence level.**  
 LEVEL -2-  
 (Hand icon pointing to the 'DSP LEVEL' button)
- 4 Adjust the volume.**  
 ① Adjust the center level.  
 • Set within a range of -40 to 0 dB.  
 (Hand icon pointing to the 'CENTER' button)  
 ② Adjust the rear level.  
 • Set within a range of -40 to 0 dB.  
 (Hand icon pointing to the 'REAR' button)
- 5 Adjust the sound quality.** Main unit only  
 (Hand icon pointing to the 'T.M.S.' button)
- 6 Set the delay time.**  
 DELAY 20-  
 (Hand icon pointing to the 'DSP DELAY' button)  
 • The delay time can be adjusted in 1 ms steps within a range of 1 ms to 50 ms.

• Set in 2 dB steps within a range of 20 to 0 dB.

## ⑥ Store a presence pattern



- 1 Select or create the presence pattern to be stored.**  
 • BYPASS cannot be stored.
- 2 Press the SURROUND MEMORY key.**  
 • The unit enters storing standby mode.
- 3 Press the M1 - M4 key.**  
 (Hand icon pointing to the 'M1' button)  
 MEMORY 4  
 • Set to M1-M4.

■ **Listening using a presence pattern**  
 To recall a pattern from the Surround memory, Press one of the M1 to M4 keys to recall a pattern directly from the Surround memory.  
 (Hand icon pointing to the 'M1' button)

■ **Listening to all preset stations in sequence: PRESET CALL**

**PRESET CALL**

Main unit  
 (Hand icon pointing to the 'PRESET CALL' button)

Remote control unit  
 (Hand icon pointing to the 'PRESET CALL' button)

Preset stations are received in order of 1, 2, 3... 20 every time the key on the main unit is pressed.  
 With the key on the remote control unit, preset stations are received in order of 1, 2... every time the [B] key is pressed, or in order of 20, 19... every time the [B] key is pressed.  
 Holding one of these keys pressed recalls the preset stations in sequence at 0.5-second intervals. When the key is released, the current preset station is received.

### 1) Removing the front panel, sub panel, FL PC board (X14-A/2), and DSP PC board (X14-B/2)

1. Remove the seven screws (1), then remove the front panel while pressing the claw (2) of sub panel.
  2. Remove the volume knob (3).
  3. Remove the BASS, TREBLE, and BAL-ANCE knobs (4).
  4. Remove the two screws (5), then remove the sub panel.
- Note: when installing the sub panel to sub chassis, insert the claw of sub panel in the sub chassis first.

5. Remove the three screws (6).
6. Remove the eight claws (7), then remove the FL PC board (X14-A/2)

(Place the PC boards on the cloth on the set.)

7. Remove the six screws (8) and remove the bracket.

8. Remove the two nuts (9) and remove the DSP board and FL board by lifting them (10).

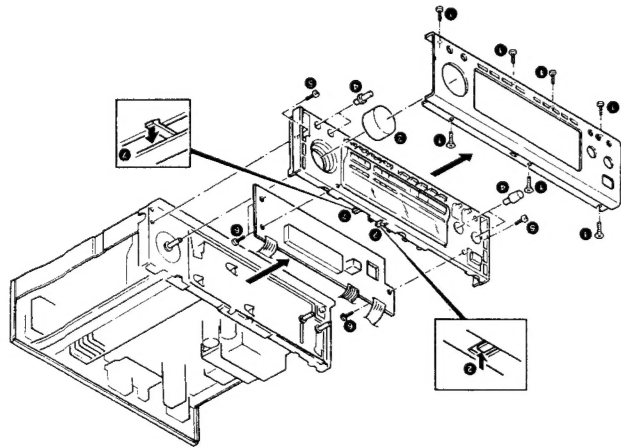
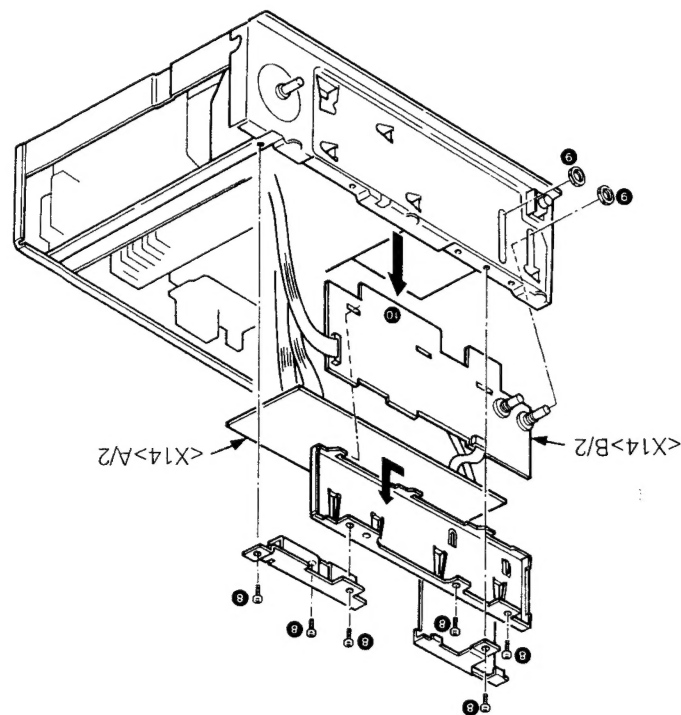
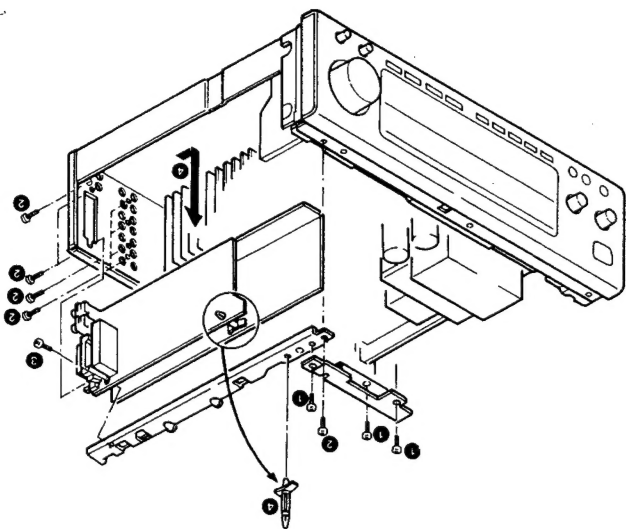
(Put the boards on the cloth on the set.)

### 2) Removing the tuner and selector PC boards (X13)

1. Remove the three screws (1), then remove the frame.
2. Remove the nine screws (2), then remove the PC boards.

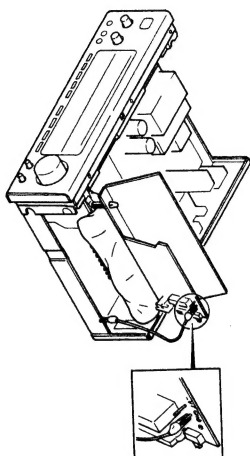
Notes: If the main VOL body shorts the +B line of class A of the selector board when removing it, a spark may be generated.

3. Remove the one screw (3), frame, and crammer (4).



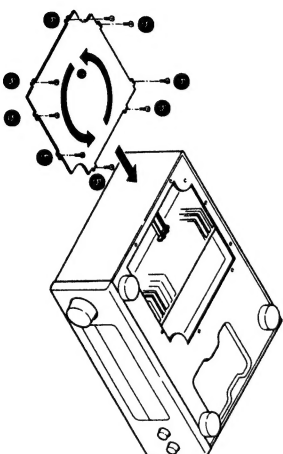
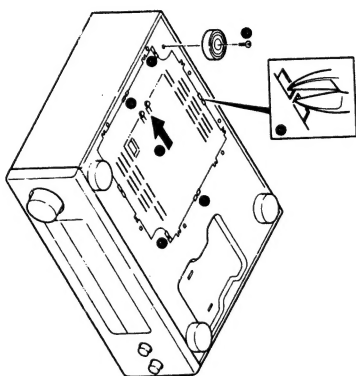
## DISASSEMBLY FOR REPAIR

4. Install the frame to former position by two screws, and insert the crammer in frame.
5. Insert the clammer into the front hole of the X13, E/5 and fix it temporarily. (Lay a cloth on top of the rear panel and connect the board ground.)



### 3) Removing the repairing chassis

1. Remove the one foot. (●)
2. Cut the six parts (●) of the repairing chassis, then remove the repairing chassis in the direction of arrow (●).

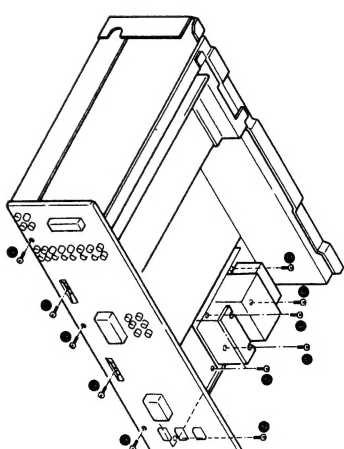


3. Turn the repairing chassis 180 degrees (●), then lock to the main chassis by eight screws (M3 x 6) (●).

## DISASSEMBLY FOR REPAIR

### 4) Removing the main chassis

1. Remove the front panel and sub panel (Refer to 1).
2. Remove the five screws (●) at the rear panel.
3. Remove the two screws (●) at the PC board, and the four screws (●) at the power transformer.



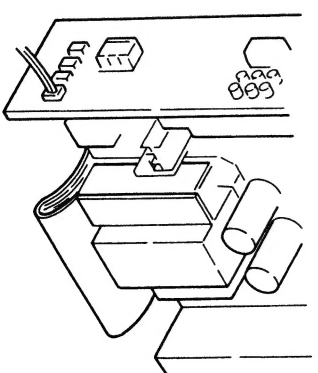
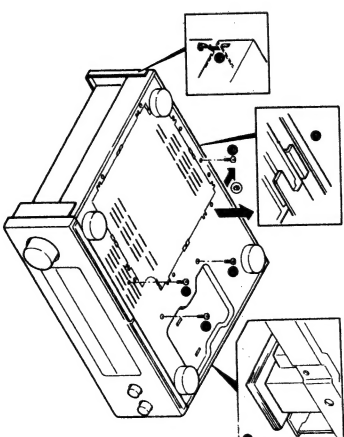
4. Place the spacer (a notebook, etc.) on the power transformer so that it is the same height as the top of the case, and turn the set over without slipping the transformer. (●).
5. Remove the four screws (●).
6. Remove the main chassis while pressing the rear panel in the direction of arrow (●).
7. Place a spacer on the left side of the power transformer and stand the set with the transformer downward.

Note: Confirm that any transformer parts or jumpers do not touch other parts, then check conductance.

### 8. To install the bottom chassis

Push the center of the bottom of the rear panel in the direction of the arrow (●) in the same way as for removal, and insert the bottom chassis from the rear side of the chassis.

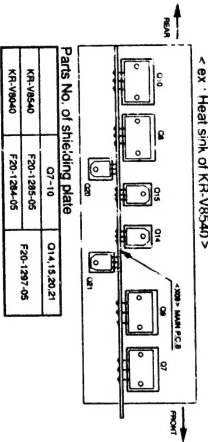
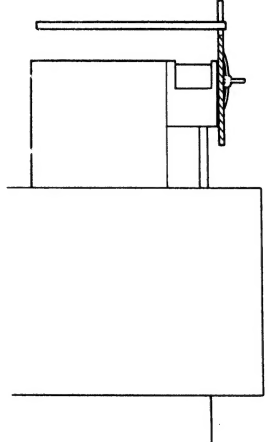
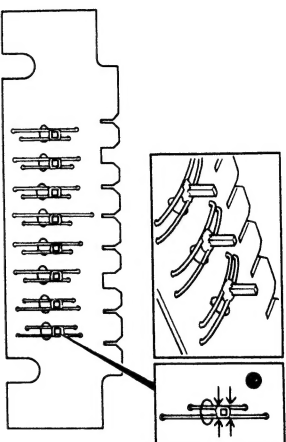
Assemble the set being careful to the projection (●). Confirm that the panel side claws have been fitted properly. (●)



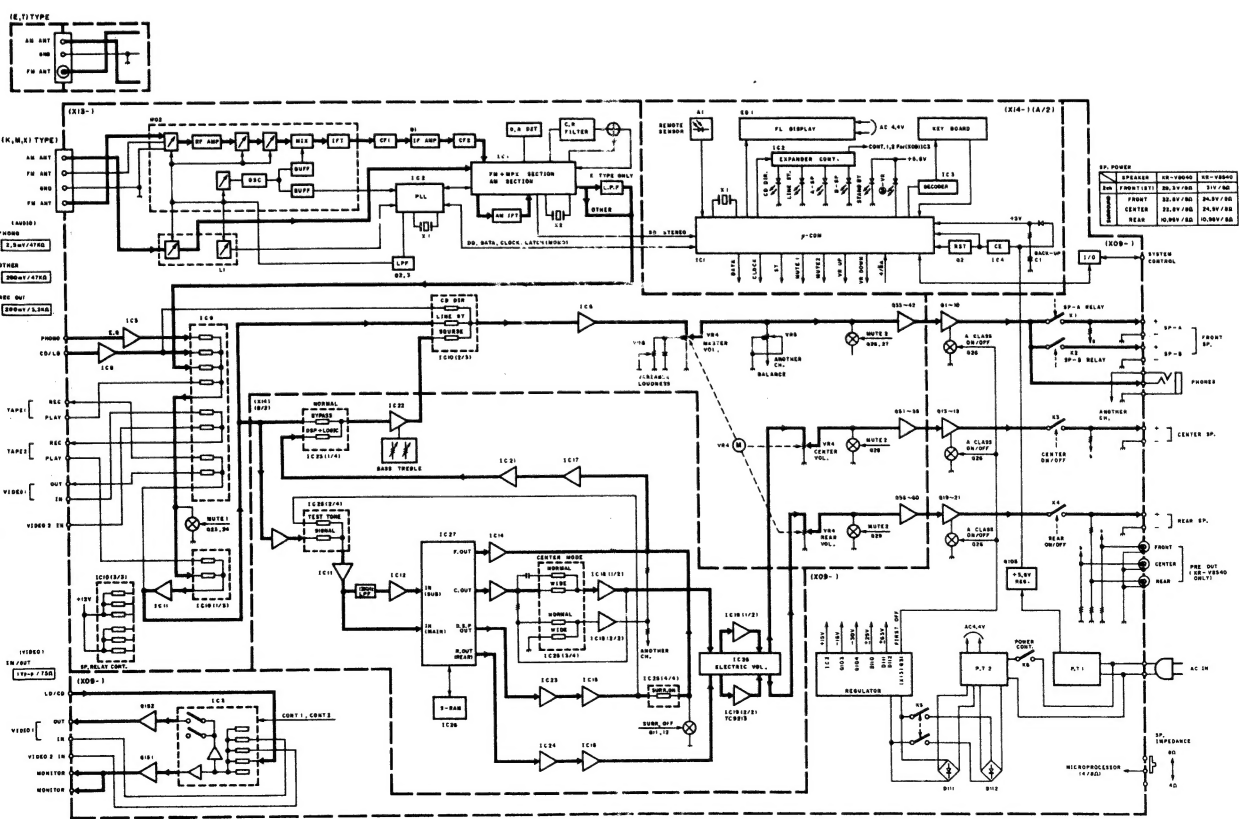
## DISASSEMBLY FOR REPAIR

### 5) Notes for soldering the secondary side of the power transformer

1. Press the jumper in the direction of the arrow ● with radio pliers so that the large area of the jumper contacts the square pin. Place solder around the square pin uniformly and take care not to spill solder over the board.
2. Solder the board at the secondary side of the transformer in parallel to the mold to prevent any gap between the board and mold.
3. The clearance between the fuse board and transformer body must be as large as possible.



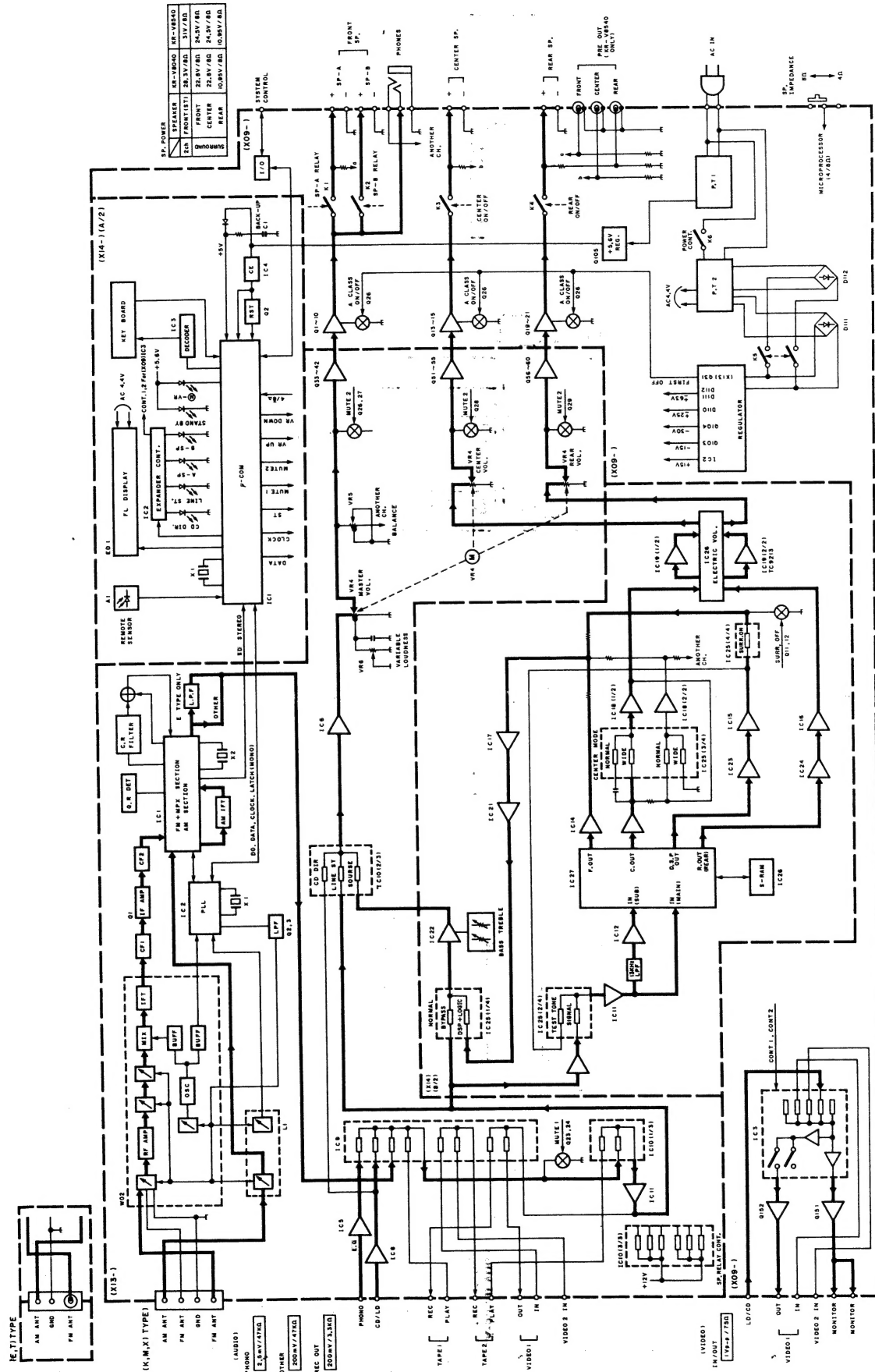
### 6) Use the final TR mylar sheet with the specified part number (F20-XX-XX-05). If you use an unspecified sheet, apply heatsink compound (white grease) to both sides of the sheet.





# KR-V8040/V8540

## BLOCK DIAGRAM



# CIRCUIT DESCRIPTION

## 1. Receiver microprocessor: CXP50124-139Q (X14:IC1)

### 1.1 Function description

- 1) Future
  - Audio selector (7 channels)  
CD/LD, PHONO, TUNER, TAPE1, TAPE2, VIDEO1, VIDEO2.
  - Visual selector (3 channels)  
CD/LD (PLAY), VIDEO1 (PLAY/REC), VIDEO2 (PLAY)
  - CD DIRECT
  - LINE STRAIGHT
  - SURROUND MODE
  - DOLBY PRO LOGIC, 3-STEREO, \*DSP LOGIC, \*DSP
  - CENTER MODE  
NORMAL, WIDE, PHANTOM (DOLBY PRO LOGIC)  
NORMAL, WIDE (3-STEREO)  
3 CH, 4 CH (\*DSP LOGIC)
  - \*DSP MODE  
ARENA, JAZZ CLUB, STADIUM, DISCOTIQUE
  - \*DSP LOGIC MODE  
LARGE THEATER, SMALL THEATER
  - User memory  
Store the four presence patterns  
Contents: Surround mode, Center mode, Delay time, Center level, Rear level, Presence level.  
Store the twenty preset stations and station names.
- 2) Control object
  - FL display
  - LED
  - VOLUME, CD DIRECT, LINE STRAIGHT, SPEAKER A, SPEAKER B
  - Electrically driven volume
  - IC
- 3) Protection  
If protection occurs when the power is on, all the keys except the POWER key are disabled and "PROTECT" is displayed.
- 4) Speaker switch  
The setting of the 4/8Ω speaker switch on the rear is read when you press one of the following keys:  
POWER SP A, SP B, PRO LOGIC, 3-STEREO, DSP, DSP LOGIC  
① 8Ω (Speaker impedance)  
A+B: Impossible, A or B: Possible; Surround: Possible  
② 4Ω (Speaker impedance)  
When the surround function is OFF: A+B: Possible  
When the surround function is ON: A + B: Impossible; A or B: Possible

- TC4028BP : For key scan, 4 to 10 decoder
- LC7218 : PLL IC
- NUJ7311L, NUJ7312L : Selector IC
- NUJ7313L : For surround expansion
- NUJ3711D : For surround control
- YSS215-F : Electric volume (Rear and center level)
- TC9213P

# CIRCUIT DESCRIPTION

## 1.2 Initial Setting

### 1) Function initial setting

POWER SELECTOR (AUDIO)	OFF
SELECTOR (VIDEO)	TUNER
TAPE 2	VIDEO1
CD DIRECT	OFF
LINE STRAIGHT	OFF
SPEAKERS A	ON
SPEAKERS B	OFF
BAND	FM
FREQUENCY	87.5 MHz
AUTOMONO	AUTO
FL DISPLAY OF PRESET CHANNEL	"--"
SURROUND	BYPASS
CENTER LEVEL	-10dB
REAR LEVEL	-10dB
CENTER MODE	NORMAL
*PRO LOGIC	NORMAL
3-STEREO	NORMAL
DSP LOGIC	3 CH

### 2) Frequency memorized for each PRESET channel when the memory is cleared (Test frequency)

CH	DESTINATION	K, P, Y, M	T, E, Y, M
1	FM	98.00	FM 98.00
2	FM	108.00	FM 108.00
3	AM	630	AM 630
4	AM	990	AM 990
5	AM	1440	AM 1440
6	AM	1610 (*1700)	AM 1602
7	FM	87.50	FM 87.50
8	FM	98.50	FM 98.50
9	AM	530	AM 531
10	FM	89.10	FM 89.10
11 ~ 20	FM	87.50	FM 87.50

\*1700kHz is set for WIDE only.

### 3) The initial setting is performed in a following event:

1. When backup memory data is destroyed when reset is applied to the microprocessor.
2. When the power cord is plugged in to the AC wall outlet while pressing the TUNER key.

# CIRCUIT DESCRIPTION

## 1.3 Test Mode Setting

### 1) Method of entering the test mode (1)

While pressing the CD/LD key, plug the power cord to the AC wall outlet. When the test mode is entered, the FL tube display and LED all lights.

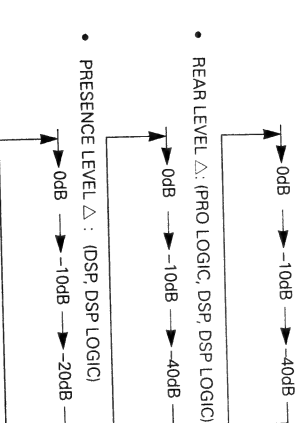
### 2) Method of entering the test mode (2)

Set the test mode (1), then, when the following keys is pressed, test mode (2) is entered.

- (TUNING) UP/DOWN : DSP
- +10 : DSP LOGIC
- BAND
- CD DIRECT
- 3-STEREO
- PRO LOGIC

### 3) Contents of test mode (2)

- (TUNING) UP : Electrically driven volume up.
- (TUNING) DOWN : Electrically driven volume down.
- +10 : Electrically driven volume stop.
- BAND : Test tone ON/OFF
- CD DIRECT : Test tone mode
- CENTER LEVEL Δ : (PRO LOGIC, 3-STEREO, DSP LOGIC)



### 4) Method of cancelling the test mode

When the power cord is plugged in to the AC wall outlet while pressing the TUNER key.

## KR-V8040/V8540

## KR-V8040/V8540

### 1.6 Block diagram around the microprocessor

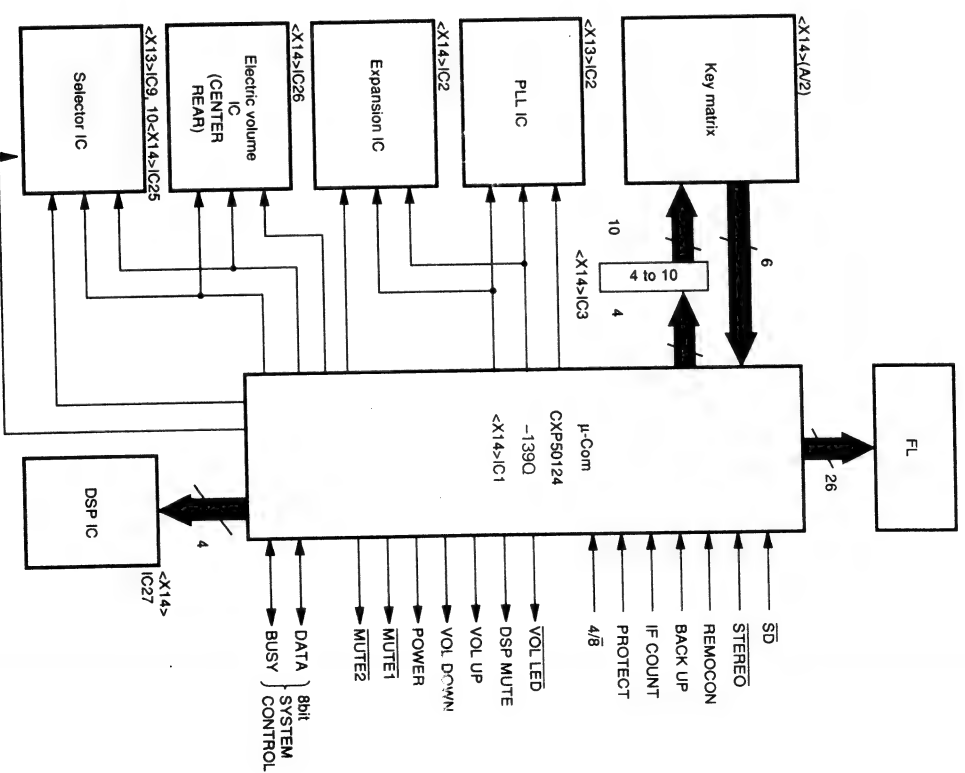
Classification set SW: AM1700k/AM1610k

Specification set diode SW	AM reception frequency band
0	530 - 1610 kHz
1 (D28)	530 - 1700 kHz

### 3) Surround set SW

1: Setting diode

## 1: Setting diode



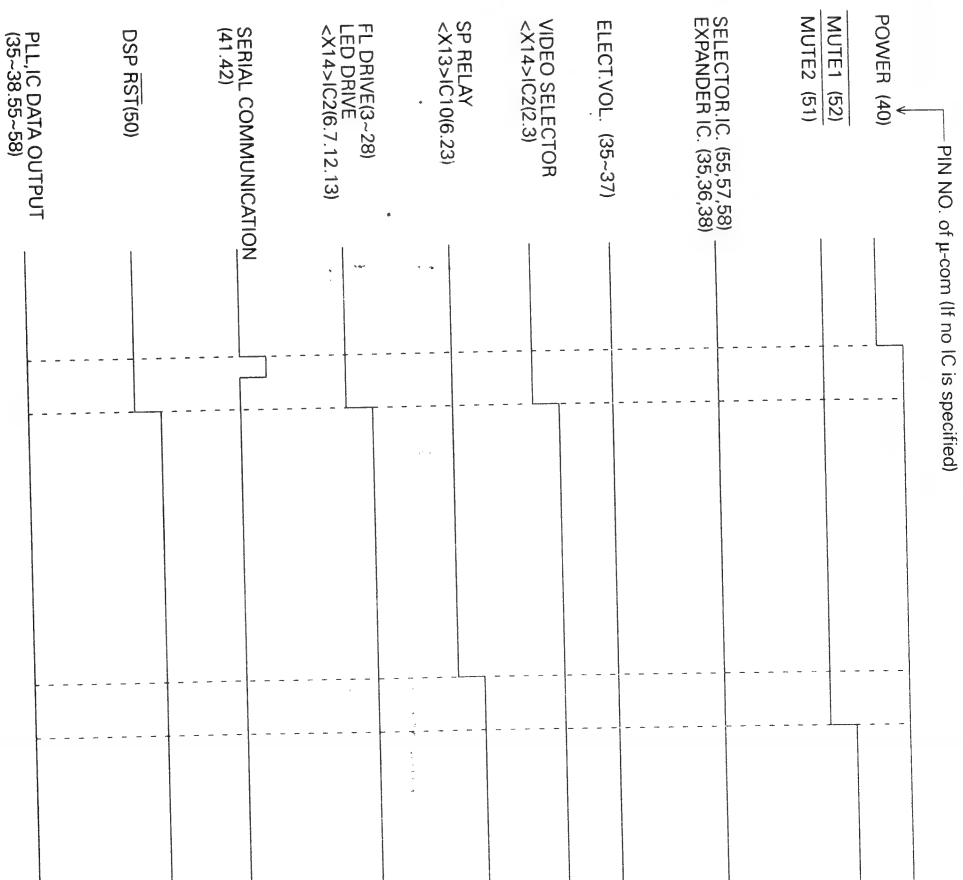
1.7 Pin description

Pin No.	I/O	Name	Function
1,2	—	No use	(OPEN)
3~18	O	SEGMENT 1~16	FL segment (P16~P1)
19~28	O	GRID 9-0	FL grid (IG~10G, 1G)
29~31	I	INT. TX. TEX	No use
32	I	RESET	Reset pin
33	—	No use	(+5V)
34	—	VDD	Power supply pin
35	O	CLOCK 1	Clock 1 (Electric volume IC, Expansion IC)
36	O	DATA 1	DATA 1 (Electric volume IC, Expansion IC)
37	O	STROBE 2	STROBE 2 (Electric volume IC)
38	O	STROBE 1	STROBE 1 (Expansion IC)
39	O	RESET (SELECTOR)	Expansion IC RESET
40	—	POWER	Power ON/OFF
41	I/O	S. BUSY	Serial BUSY
42	I/O	S. DATA	Serial DATA
43	—	EG	(GND)
44	I	4/8	Speaker impedance (4 $\Omega$ /8 $\Omega$ ) selection H:4 $\Omega$ L:8 $\Omega$
45	I	PROTECT	Protection signal input
46	I	IF COUNT	IF COUNT input
47	O	WCK	DSP IC (YSS215-F) WCK
48	O	BCK	DSP IC (YSS215-F) BCK
49	O	CD	DSP IC (YSS215-F) CD
50	O	RESET	DSP IC (YSS215-F) RESET
51	O	MUTE2	MUTE2
52	O	MUTE1	MUTE1
53	O	VOL. DOWN	Electrically driven volume control
54	O	VOL. UP	Electrically driven volume control
55	O	STROBE3	STROBE3 (Selector IC)
56	O	STROBE4	STROBE4 (PLL IC)
57	O	DATA2	DATA2 (PLL IC, Selector IC)
58	O	CLOCK2	CLOCK2 (PLL IC, Selector IC)
59	O	DSP MUTE	For DSP mute
60	O	VOL. LED	Volume LED
61	I	BACKUP	Backup input pin
62	I	REMOCON	Remote control input pin
63	I	STEREO	Stereo detection signal input
64	I	SD	Tuning detection signal input
65~70	I	KRS-0	Key return 5~0
71	—	Vss	GND
72	—	XTAL	System clock oscillation pin
73	—	No use	(GND)
74	I	EXTAL	System clock oscillation pin
75	—	VREF	No use
76	—	VFDP	Power supply for fluorescent display drive pin
77~80	O	KSO-3	Key scan 0~3

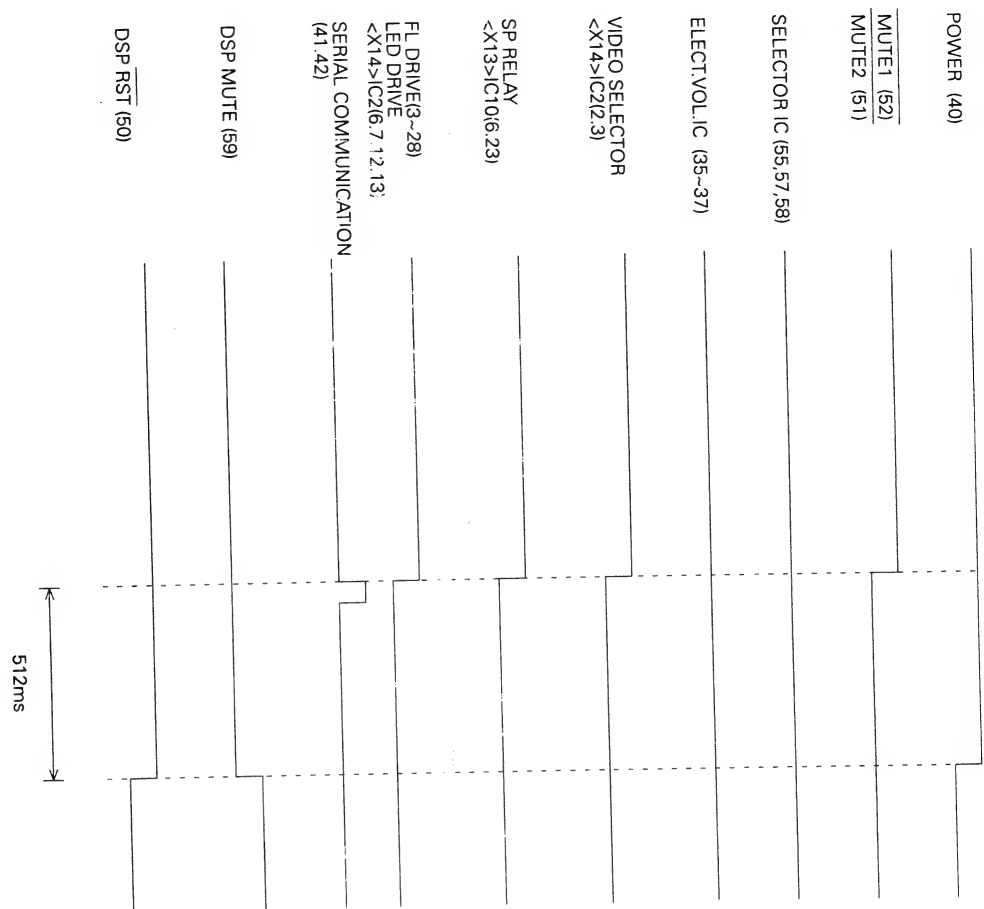
1.8 Timing chart

1) POWER

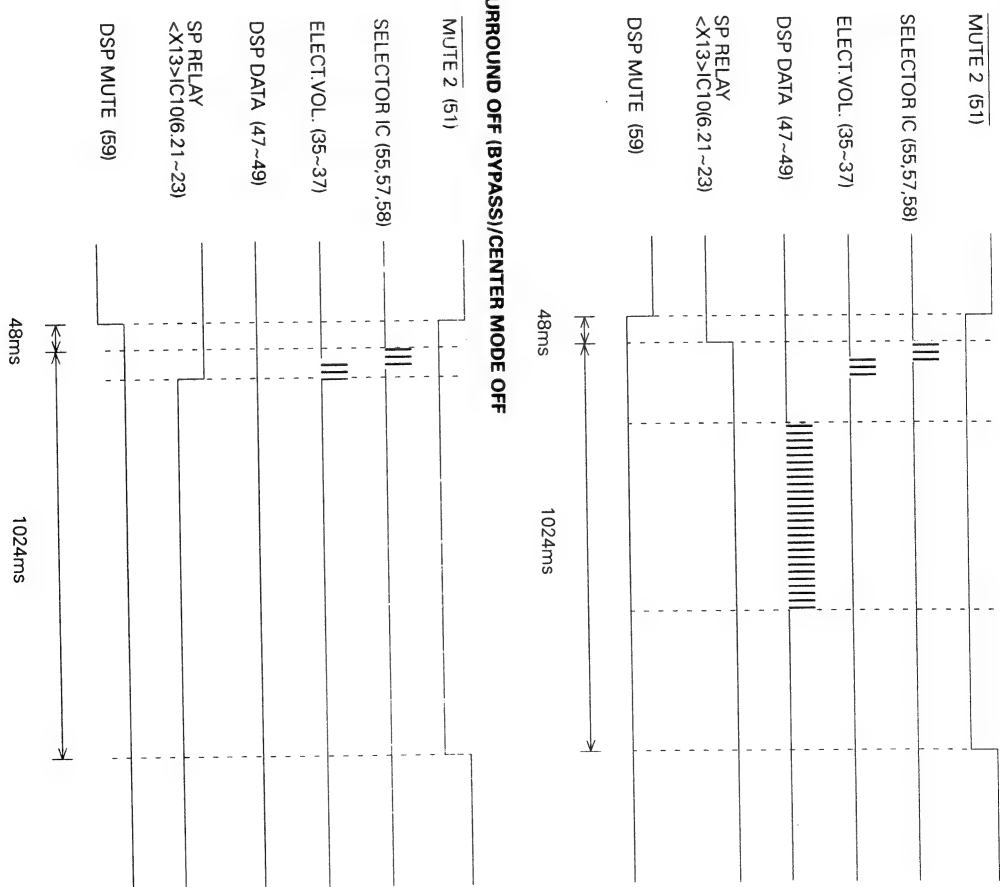
POWER ON



POWER OFF



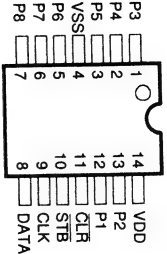
2) SURROUND MODE/CENTER MODE change  
 SURROUND ON/CENTER MODE ON



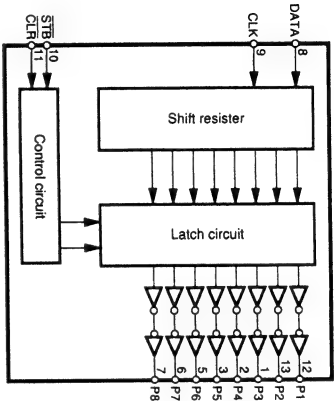


2. 8bit Serial-Parallel IC: NUJ3711D (X14:IC2)

2.1 Pin connection



2.2 Block diagram



2.3 Pin description

Pin No.	Name	Function	Pin No.	Name	Function
1	P3	Parallel conversion data output	8	DATA	Serial data input
2	P4		9	CLK	Clock signal input
3	P5		10	STB	Strobe signal input
4	Vss	GND	11	CLR	CLR signal input
5	P6		12	P1	Parallel conversion data output
6	P7		13	P2	
7	P8	Parallel conversion data output	14	VDD	

2.4 Function description

- ① Reset  
When you set the CLR pin to low, all latches are reset, and all parallel outputs go low. Normally, you should set the CLR pin to high.
- ② Data transfer  
When you set the STB pin to high, the serial data input to the DATA pin is loaded into the shift register in synchronization with a rising edge of the clock applied to the CLK pin.

PIN No.	⑩	⑪	Description
⑨	CLK	STB	Reset all the contents of the latch circuit (the contents of the shift register remain unchanged) and make all parallel outputs low.
	X	L	Load serial data at the DATA pin to the shift register. The contents of the latch circuit are unchanged.
	H	H	Transfer the contents of the shift register to the latch circuit and output the contents of the latch circuit from parallel output.
	L	L	If CLK is input when STB is low and CLR is high, the contents of the shift register are shifted and the contents of the latch circuit are changed.

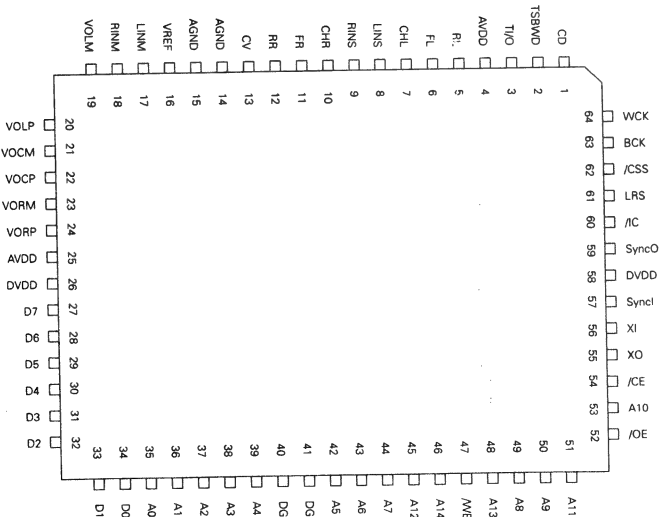
Note: X: Don't care

3. DSP IC: VSS215-F (X14:IC27)

3.1 Features

- High-precision signal processing with 32-bit internal operation word length.
- Analog control of three front channels L-ch, C-ch, and R-ch.
- Contains the directional emphasis circuit by digital signal processing, noise sequence, 7kHz low-pass filter, varied Dolby B type N.R. decoder (can be turned on and off).
- Built-in auto input balance (can be turned on and off)
- Noise sequence can be controlled by microprocessor.
- Dolby reference operate level: 300 mV r.m.s.
- The sound field can processed with eight taps and a maximum delay of 370 ms for the S-ch and (L+R) signals in the dolby prologic mode.
- Built-in sound field simulation surround function by digital delay
- Built-in 15-bit floating A/D converter and D/A converter
- 256K pseudo SRAM interface for 16-bit linear external delay
- Parameter control with the microprocessor interface
- Master clock: 11.2896 MHz; Sampling frequency: 44.1 kHz

3.2 Pin connection



CIRCUIT DESCRIPTION

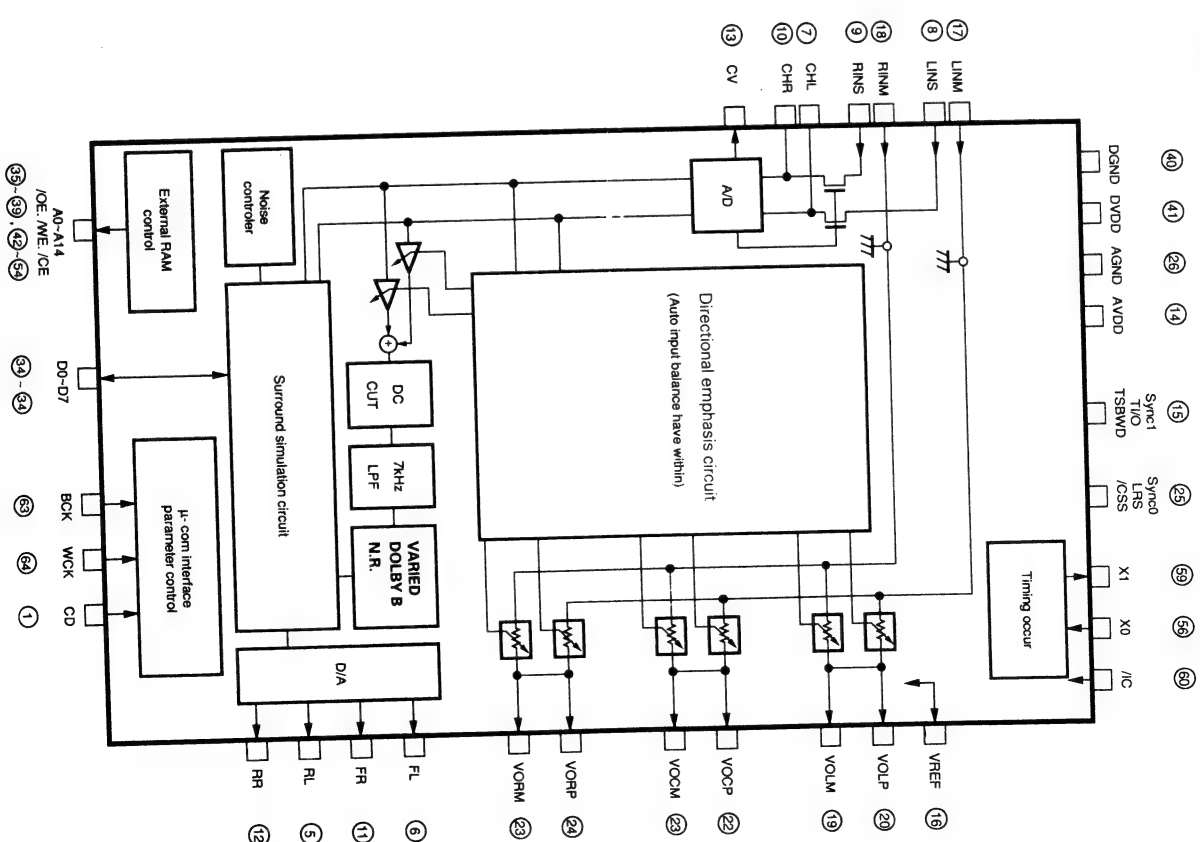
3.3 Pin function

Pin No.	I/O	Name	Function
1	It	CD	Serial data of parameter data input
2	It	TSBWD	LSI test Pin. Normally, connect the DVDD
3	Ic	TIO	LSI test Pin. Normally, connect the DVDD
4	A-	AVDD	+5V power supply (analog-to-digital, digital-to-analog systems)
5	AO	RL	RL channel digital-to-analog output DSP <sub>1</sub> output
6	AO	FL	FL channel digital-to-analog output DSP <sub>1</sub> output
7	A-	CHL	LINS input, sample/hold capacitor pin
8	AI	LINS	L channel analog-to-digital input
9	AI	RINS	R channel analog-to-digital input
10	A-	CHR	RINS input, sample/hold capacitor pin
11	AO	FR	FR channel digital-to-analog output DSP output
12	AO	RR	RR channel digital-to-analog output DSP output
13	AO	CV	Analog-to-digital, multiplying DAC, center voltage
14	A-	AGND	Ground (analog-to-digital, digital-to-analog systems)
15	A-	VREF	Ground (multiplying DAC system)
16	AI	RINM	Multiplying DAC, reference voltage input
17	AI	LINM	L channel, multiplying DAC input
18	AI	VOLM	L channel op-amp (-)
19	AO	VOLP	C channel op-amp (-)
20	AO	VOCM	C channel op-amp (+)
21	AO	VOCM	DSP PRO LOGIC output
22	AO	VORM	R channel op-amp (+)
23	AO	VORP	R channel op-amp (-)
24	AO	AVDD	+5V power supply (multiplying DAC system)
25	A-	DVDD	+5V power supply (Digital system)
26	-	DVDD	External delay RAM date pin
27-34	I/Ot	D7-D0	External delay RAM address pin
35-39	O	A0-A4	Ground (digital system)
40	-	DGND	Ground (digital system)
41	-	DGND	Ground (digital system)
42-46	O	A5-A7 A12, A14	External delay RAM address pin
47	O	AME	External delay RAM write enable pin
48-51	O	A13, A8, A9, A11	External delay RAM address pin
52	O	/OE	External delay RAM output enable pin
53	O	A10	External delay RAM address pin
54	O	/CE	External delay RAM chip enable pin
55	O	XO	Crystal oscillator <sup>1)</sup> 11.2896MHz
56	O	XI	Test pin for system synchronism. Normally, connect the DVDD
57	It	SyncI	+5V power supply (digital system)
58	-	DVDD	Test pin for system synchronism
59	O	SyncO	Initial clear pin
60	Ics	/IC	Auto input balance pin
61	O	LRS	Bit clock of parameter data input
62	O	/CSS	Auto input balance pin
63	O	BCK	Bit clock of parameter data input
64	Ils	WCK	Ward clock of parameter data input

Note  
I: Input pin  
C: CMOS level  
O: Output pin  
S: Schmitt input  
t: TTL level  
A: Analog pin

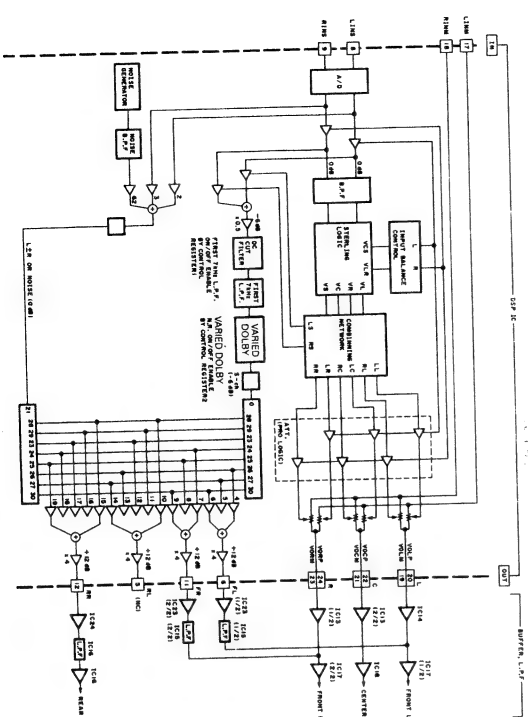
CIRCUIT DESCRIPTION

3.4 Block diagram



CIRCUIT DESCRIPTION	KR-V8040/V8540

**(D.S.P)**

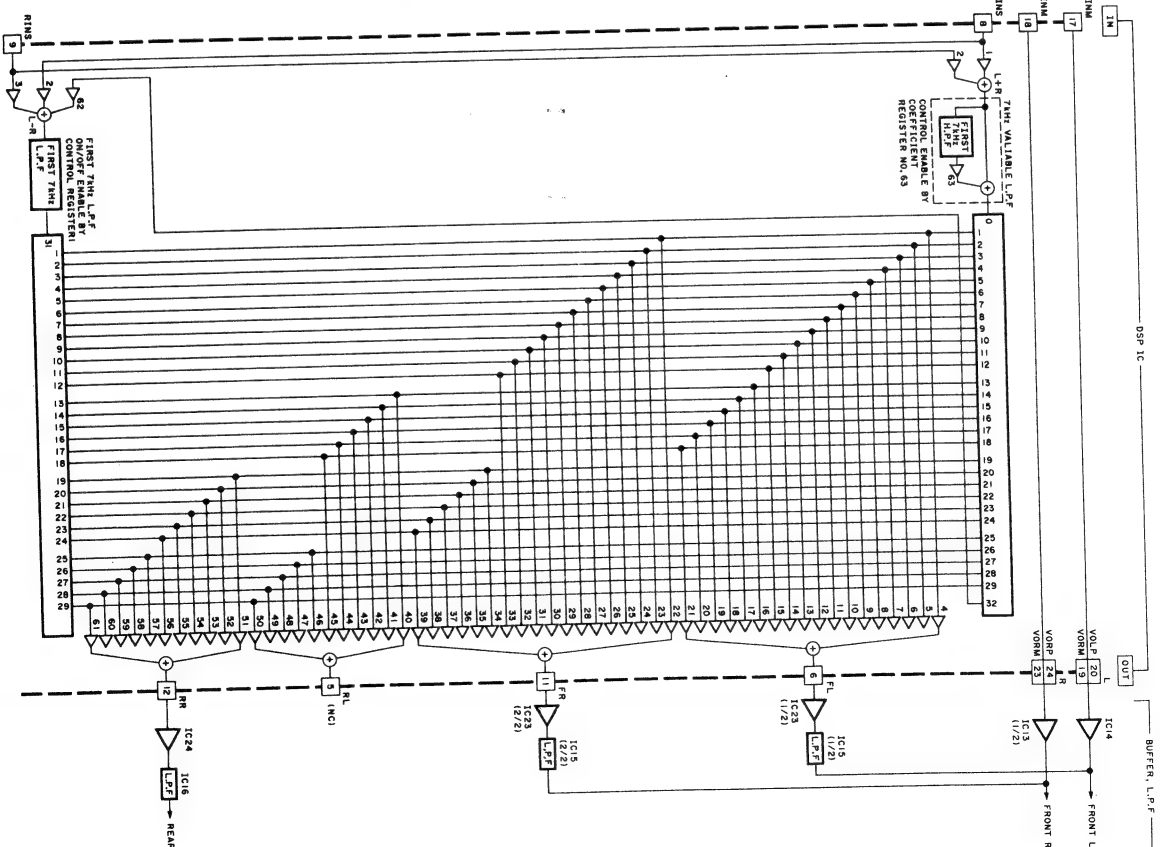


74Hz VALLABLE L.P.F.

CONTROL ENABLE BY  
COEFFICIENT  
REGISTER NO.63

FIRST  
74Hz  
H.P.F.

63



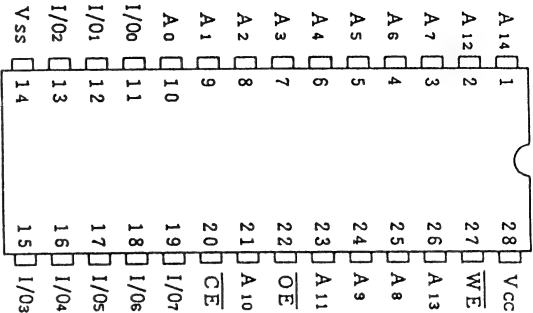
CIRCUIT DESCRIPTION

KR-V8040/V8540

R-V8040/V8540

4 S-RAM: HM65256BLFP-10(X14:IC28)

4.1 Pin connection



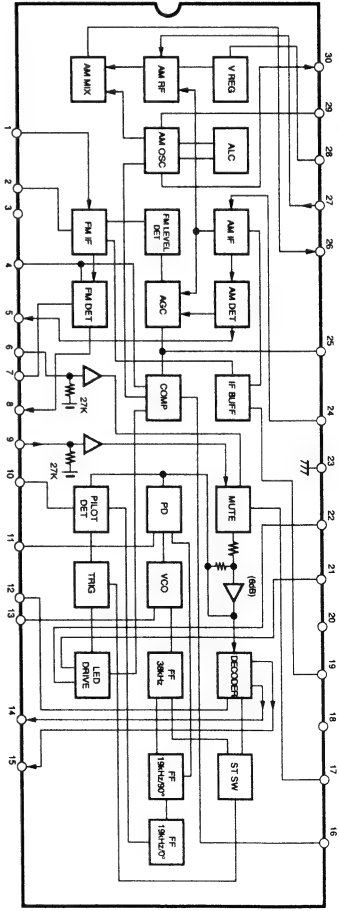
4.2 Function table

$\overline{CE}$	$\overline{OE}$	$\overline{WE}$	I/O pin	Mode
L	L	H	Low Z	Read
L	X	L	High Z	Write
L	H	H	High Z	—
H	L	X	High Z	Refresh
H	H	X	High Z	Standby

CIRCUIT DESCRIPTION

5 FM, AM, MPX system IC: LA1851N (X13:IC1)

5.1 Block diagram



5.2 Pin description

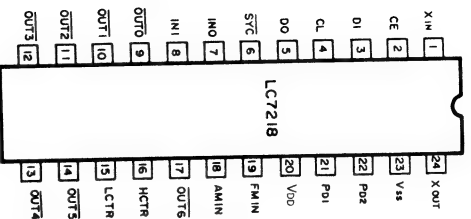
Pin No.	Function	Remark
1	FM IF input	Input impedance 330 $\Omega$
2	FM IF Bias	
3	Vcc	When FM AFC is detuned, the ST LED goes off and the forced monaural mode is set.
4	FM AFC output	
5	AM demodulation output	
6	MPX AM DET input	MPX section, AM demodulation input. Input impedance 27k $\Omega$
7	FM demodulation output	
8	MPX FM DET input	Output impedance 5k $\Omega$ MPX section, FM demodulation input. Input impedance MPX VCO stops by shorting the voltage at pin 10 to the VCC line at pin 3. A 33k $\Omega$ current limiting resistor is required.
10	MPX Pilot synchronization detection filter	
11	MPX PLL loop filter	
12	MPX separation control	
13	MPX VCO	Ceramic oscillator
14	MPX Lch output	
15	MPX Rch output	
16	AM/SD ADJ	
17	MPX AF muting drive	V <sub>H</sub> $\geq$ 1.5V: Mute ON V <sub>H</sub> < 1.5V: Mute OFF
18	AM/FM change	V <sub>H</sub> $\geq$ 1.5V: FM V <sub>H</sub> < 1.5V: AM
19	AM/FM IF count output SW combined use	V <sub>H</sub> $\geq$ 1.5V: IF CNT ON V <sub>H</sub> < 1.5V: IF CNT OFF
20	TU/ST LED	V <sub>H</sub> $\geq$ 1.5V: LED forced off (forced monaural mode) V <sub>H</sub> < 1.5V: Normal
21	AM/FM, TU/ST LED	
22	MPX ST LED	
23	AM/FM MPX GND	
24	AM IF input	Input impedance 2k $\Omega$
25	AM AGC output, FM S meter output	
26	AM MIXER output	
27	AM IF input	
28	V Reg	V <sub>reg</sub> = 2.3V
29	AM OSC	
30	AM SD ADJ combined use	

CIRCUIT DESCRIPTION

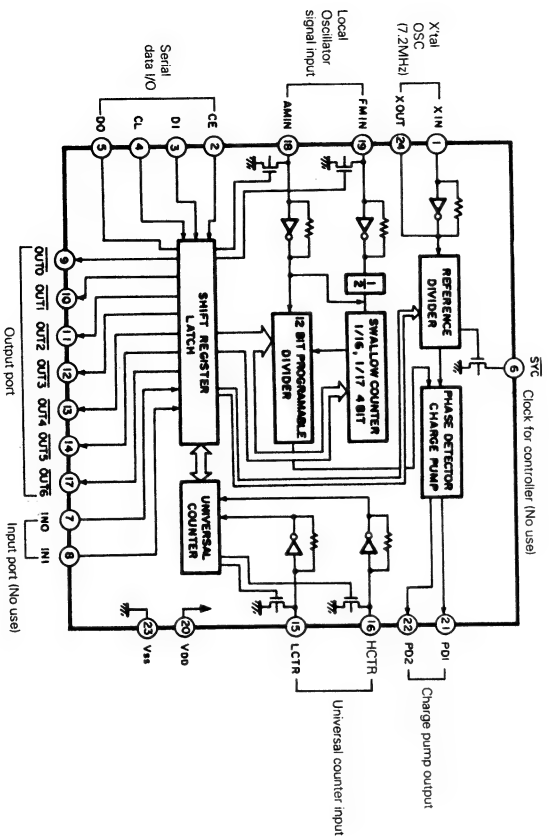
CIRCUIT DESCRIPTION

6 PLL IC:LC7218 (X13:IC2)

6.1 Pin connection

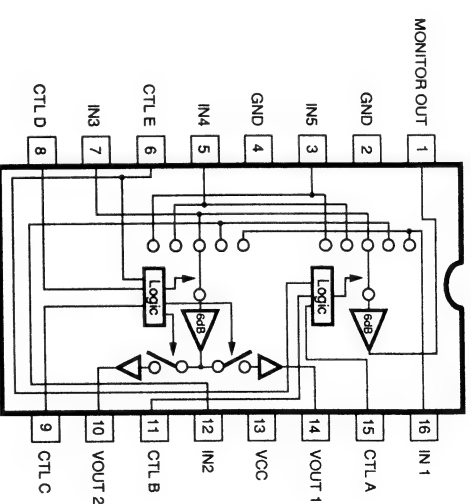


6.2 Block diagram



7 Video amp. selector: BA7626 (X09: IC3)

7.1 Block diagram



7.2 Function table

A	B	C	D	E	MONITOR OUT	V OUT1	V OUT2
L	L	L	L	*	IN1	—	IN1
H	L	H	L	*	IN2	IN2	—
L	H	L	H	*	IN3	IN3	IN3
H	H	H	H	L	IN4	IN4	IN4
H	H	H	H	H	IN5	IN5	IN5

H: High L: Low \*: High or Low

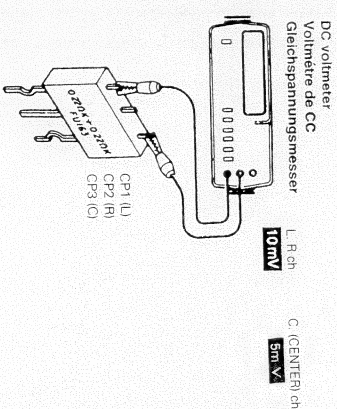
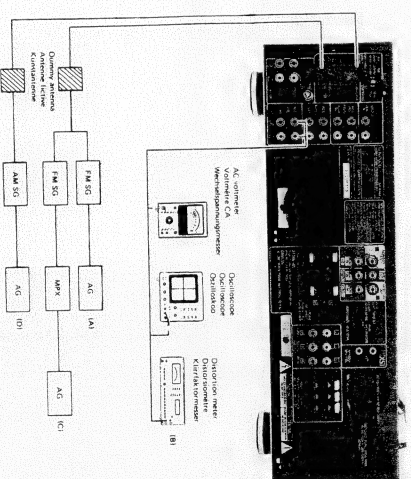


# KR-V8040/V8540

## ADJUSTMENT

AM Section: If alignment point is "...", confirm the value.  
If not, replace the front end pack.

NO.	ITEM	INPUT SETTINGS	OUTPUT SETTINGS	TUNE SETTINGS	ALIGNMENT POINTS	ALOCK FOR	FIG.
FM SECTION							
1	DISCHARGE FACTOR	(A) 98.0MHz 14MHz, 73kHz dev 600Hz (AFT input)	Connect a DC voltmeter across TP4, (X13-)	AUTO or MONO 98.0MHz	L3 (X13-)	0V	(a)
2	DISTORTION (MONO)	14MHz, 200.25kHz dev Stereo: 14 or R Pilot: 16.75kHz dev C/E type 600Hz (AFT input)	(B)	98.0MHz	L4 (X13-)	Minimum distortion	
3	DISTORTION (STEREO)	98.0MHz 14MHz, 168.25kHz dev Stereo: 14 or R Pilot: 16.75kHz dev 600Hz (AFT input)	(B)	98.0MHz	LPT (X13-)	Minimum distortion (L or R)	
4	SEPARATION	98.0MHz Stereo signal 600Hz (AFT input)	(B)	AUTO 98.0MHz	V83 (X13-)	Minimum cross-talk	
5	TUNING LEVEL	98.0MHz dev 14MHz (AFT input) 750	(B)	AUTO or MONO 98.0MHz	V81 (X13-)	Adjust V81 and stop at the point where EDI (TUNED) goes on.	
AM SECTION							
(1)	TUNING LEVEL	(D) 1000(990)kHz 200Hz (AFT input)	(B)	-	V82 (X13-)	Adjust V82 and stop at the point where EDI (TUNED) goes on.	
AUDIO SECTION							
(1)	DC CURRENT	(E) Connect a DC voltmeter across CP1 (L), CP2 (R), CP3 (C) (X08-)	Volume 0	V81 (L) V82 (R) V83 (C)	L84 (L, R) 5mV (C)		(b)

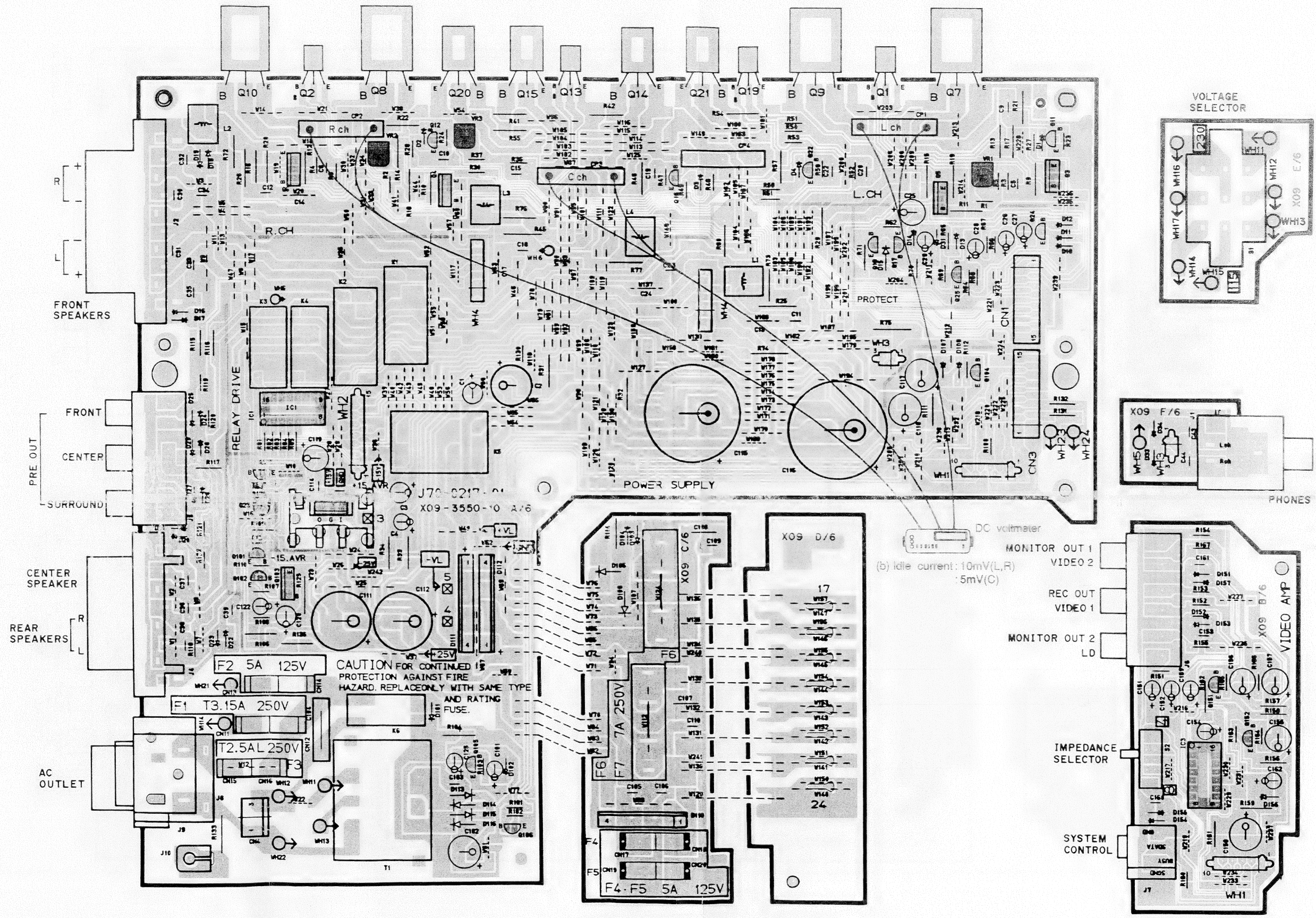








PC BOARD (Component side view)

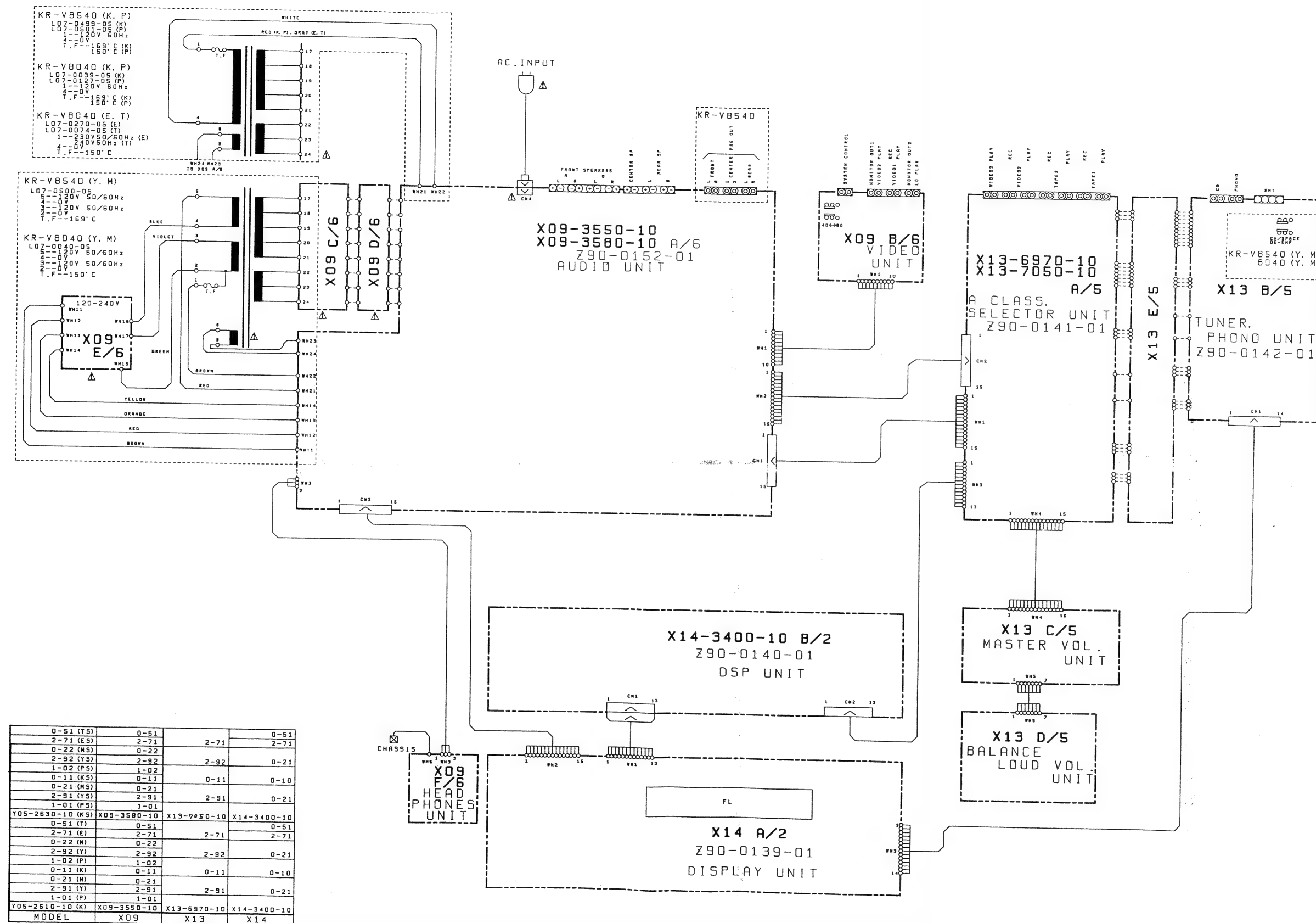


Refer to the schematic diagram for the values of registers and capacitors.



# KR-V8040/V8540 KR-V8040/V8540

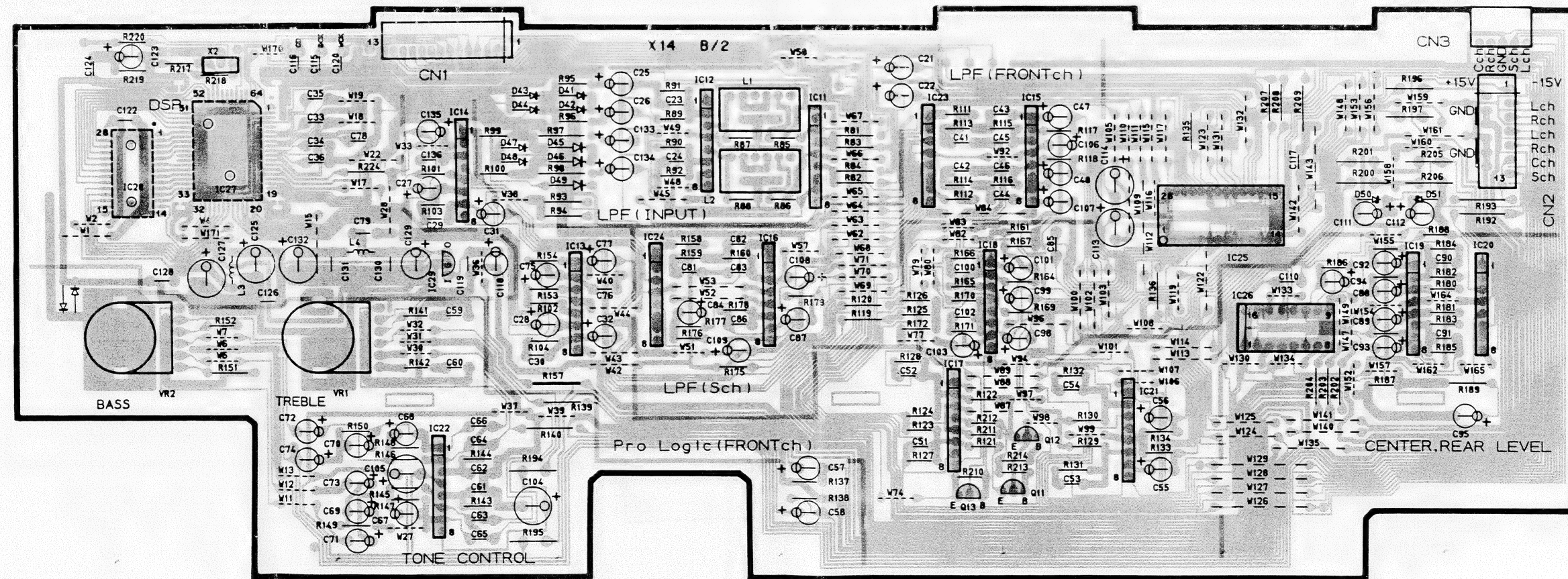
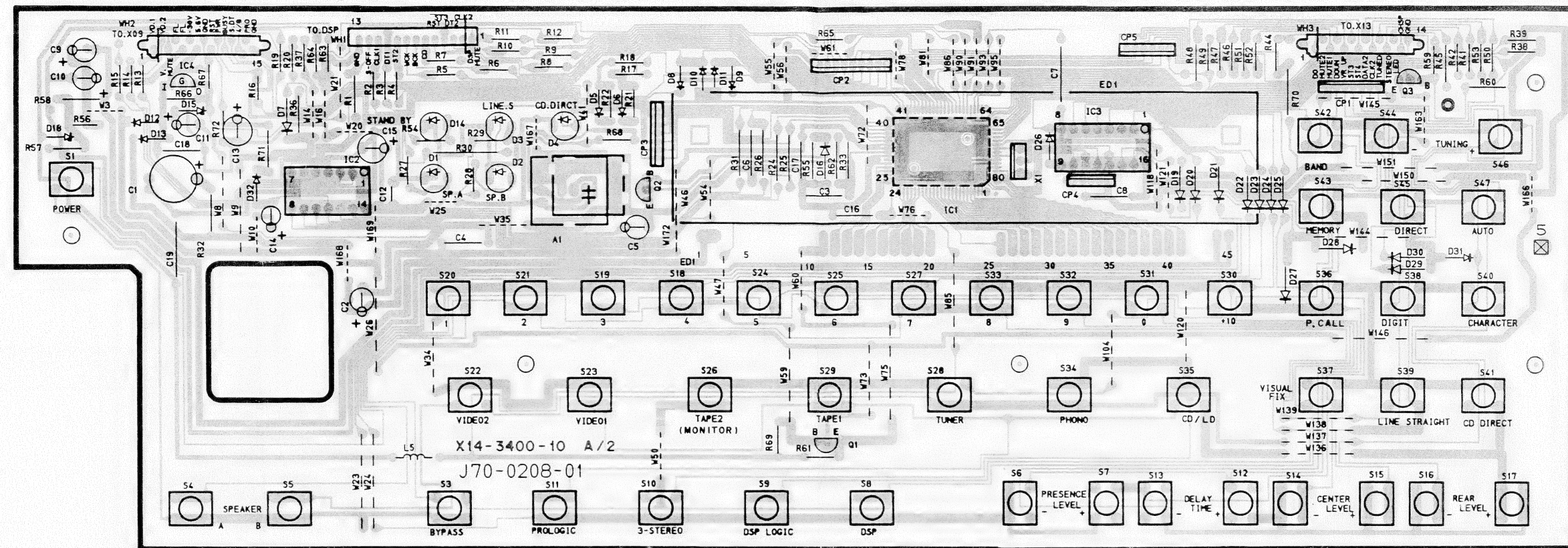
## WIRING DIAGRAM



0-51 (TS)	0-51	0-51	0-51
2-71 (ES)	2-71	2-71	2-71
0-22 (MS)	0-22	0-22	0-22
2-92 (YS)	2-92	2-92	0-21
1-02 (PS)	1-02	1-02	0-21
0-11 (KS)	0-11	0-11	0-10
0-21 (MS)	0-21	0-21	0-21
2-91 (YS)	2-91	2-91	0-21
1-01 (PS)	1-01	1-01	0-21
Y05-2630-10 (KS)	X09-3580-10	X13-7050-10	X14-3400-10
0-51 (T)	0-51	0-51	0-51
2-71 (E)	2-71	2-71	2-71
0-22 (N)	0-22	0-22	0-21
2-92 (Y)	2-92	2-92	0-21
1-02 (P)	1-02	1-02	0-21
0-11 (K)	0-11	0-11	0-10
0-21 (M)	0-21	0-21	0-21
2-91 (Y)	2-91	2-91	0-21
1-01 (P)	1-01	1-01	0-21
Y05-2610-10 (K)	X09-3550-10	X13-6970-10	X14-3400-10
MODEL	X09	X13	X14



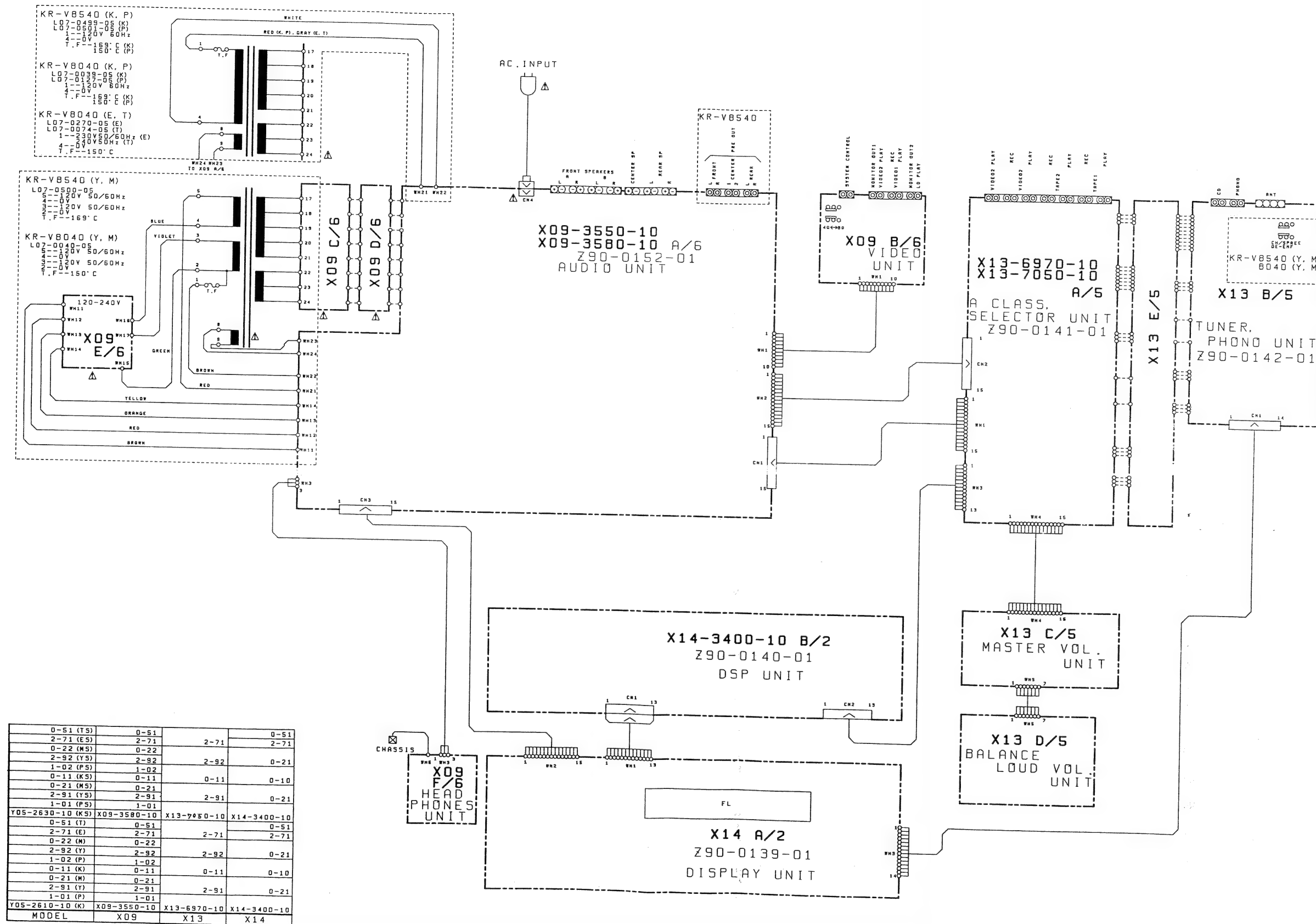
# PC BOARD (Component side view)



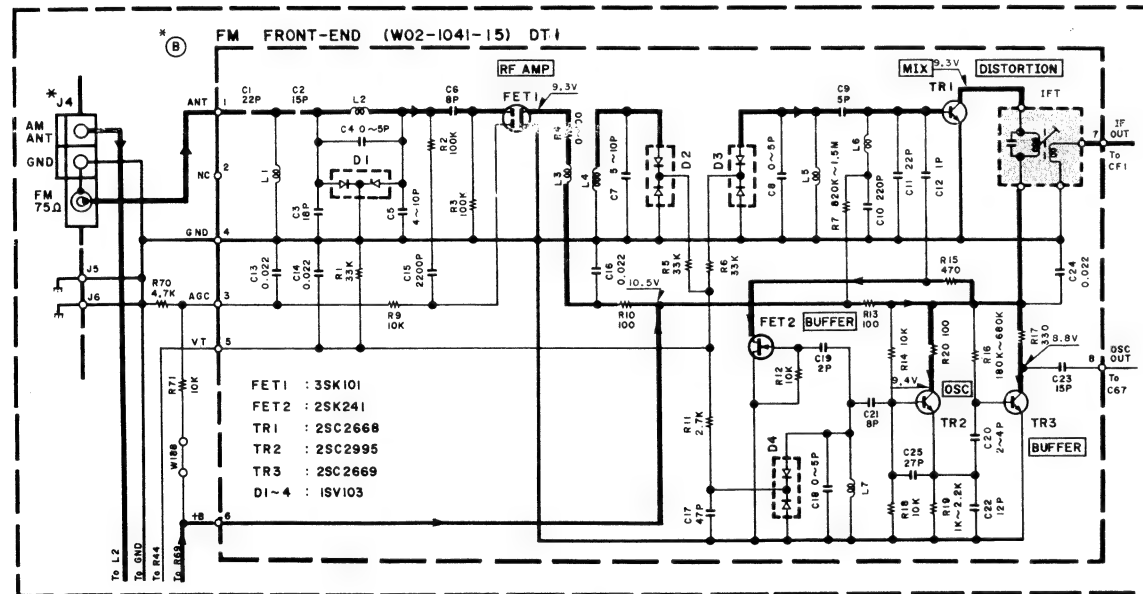
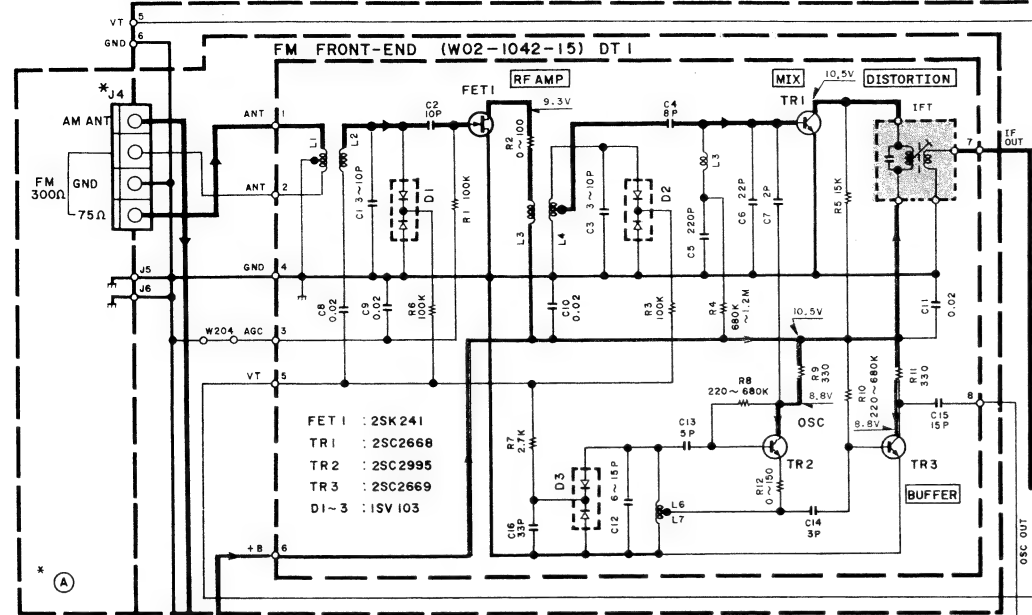


# KR-V8040/V8540 KR-V8040/V8540

## WIRING DIAGRAM



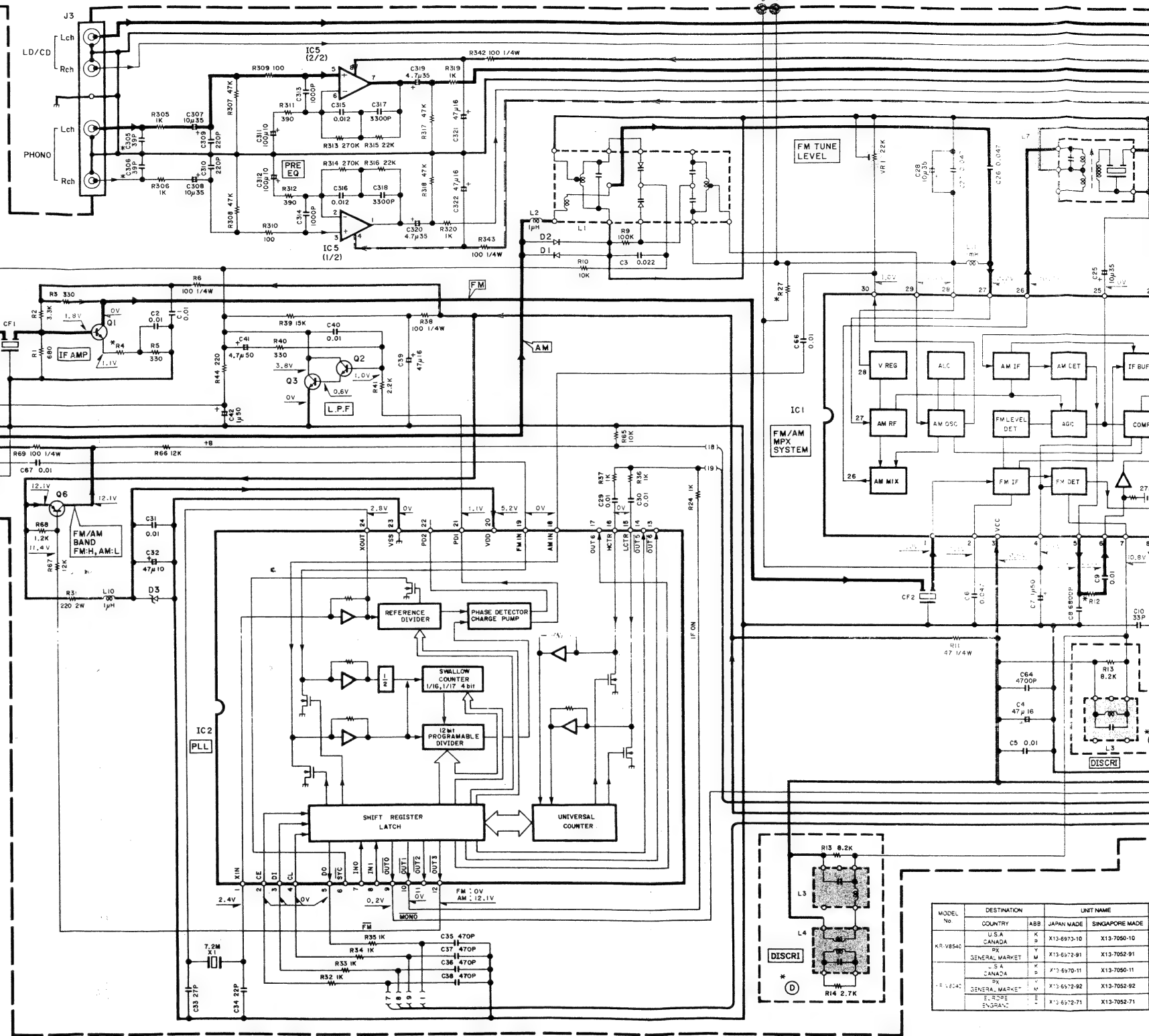
TUNER, PHONO UNIT  
(X13-6970-10)(B/5)



IC1 : LA1851N  
IC2 : LC7218  
IC3 : RC4565L or NJM4565L  
IC4 : TA8409S  
IC5,6 : NJM4580D-D  
IC7,8 : RC4565D-D or NJM4565D-D

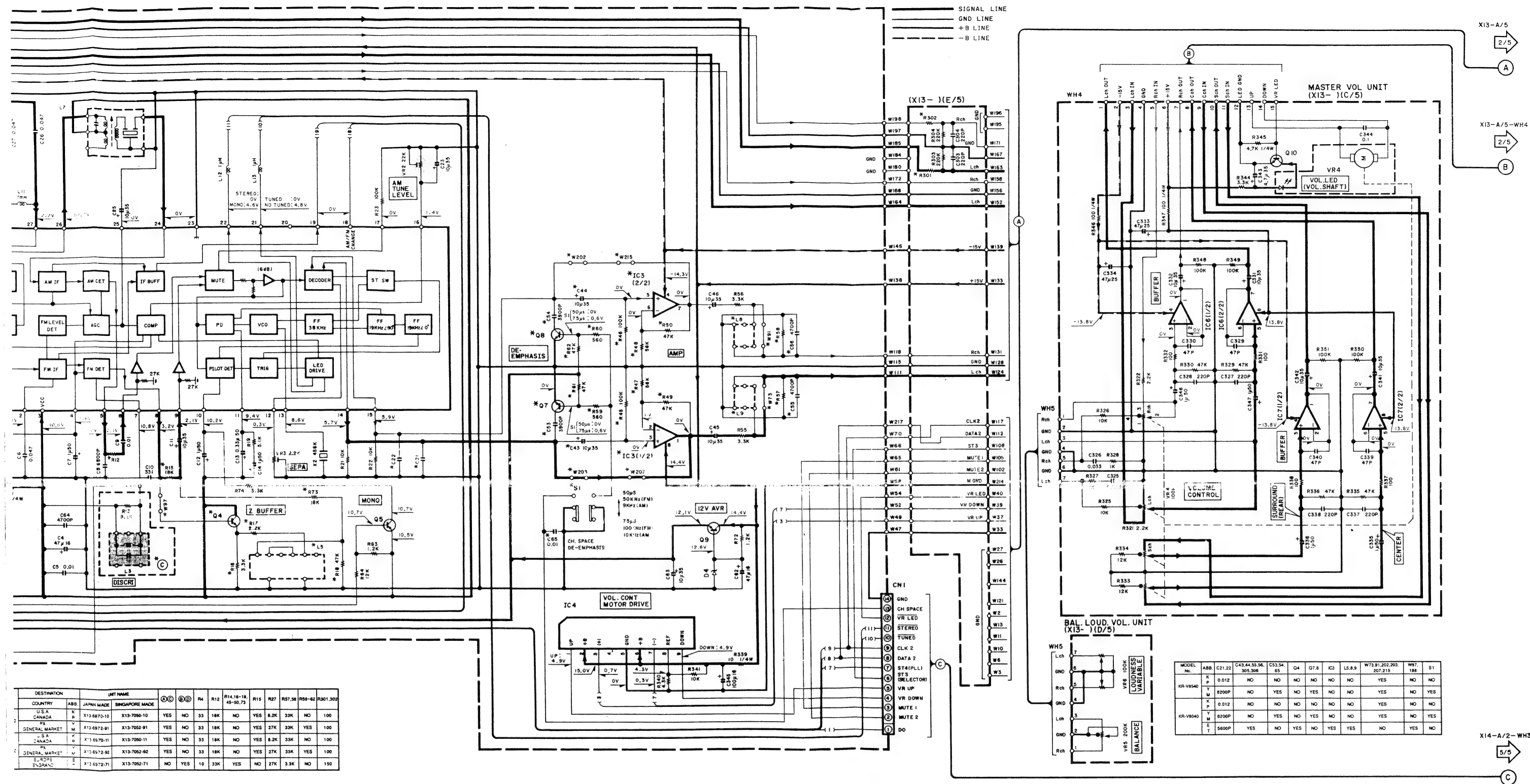
Q1 : 2SC1923(R,O)  
Q2 : 2SC1845(F,E)  
Q3,4,7,8,10 : 2SC2458(Y,GR) or 2SC3311A(Q,R)  
or 2SC1740S(Q,R) or 2SC2785(F,E)  
Q5,6 : 2SA1048(Y,GR) or 2SA1039A(Q,R)  
or 2SA1175(F,E) or 2SA933S(Q,R)  
Q9 : 2SC2003(L,K)

D1,2 : HSS104 or 1SS133  
D3 : HZS5.1N(B2) or RD5.1ES(B2)  
D4 : HZS13N(B2) or RD13ES(B2)



DC voltages are as measured with a high impedance voltmeter with no signal input. Values may vary slightly due to variations between individual instruments or/and units.

MODEL No.	DESTINATION	ABB	JAPAN MADE	SINGAPORE MADE
A.R.V8540	U.S.A.	K	X13-6970-10	X13-7050-10
	CANADA	P	X13-6970-10	X13-7050-10
	GENERAL MARKET	M	X13-6970-11	X13-7052-91
	U.S.A.	K	X13-6970-11	X13-7050-11
	CANADA	P	X13-6970-11	X13-7050-11
	GENERAL MARKET	M	X13-6970-12	X13-7052-92
	U.S.A.	K	X13-6970-12	X13-7052-92
	CANADA	P	X13-6970-12	X13-7052-92



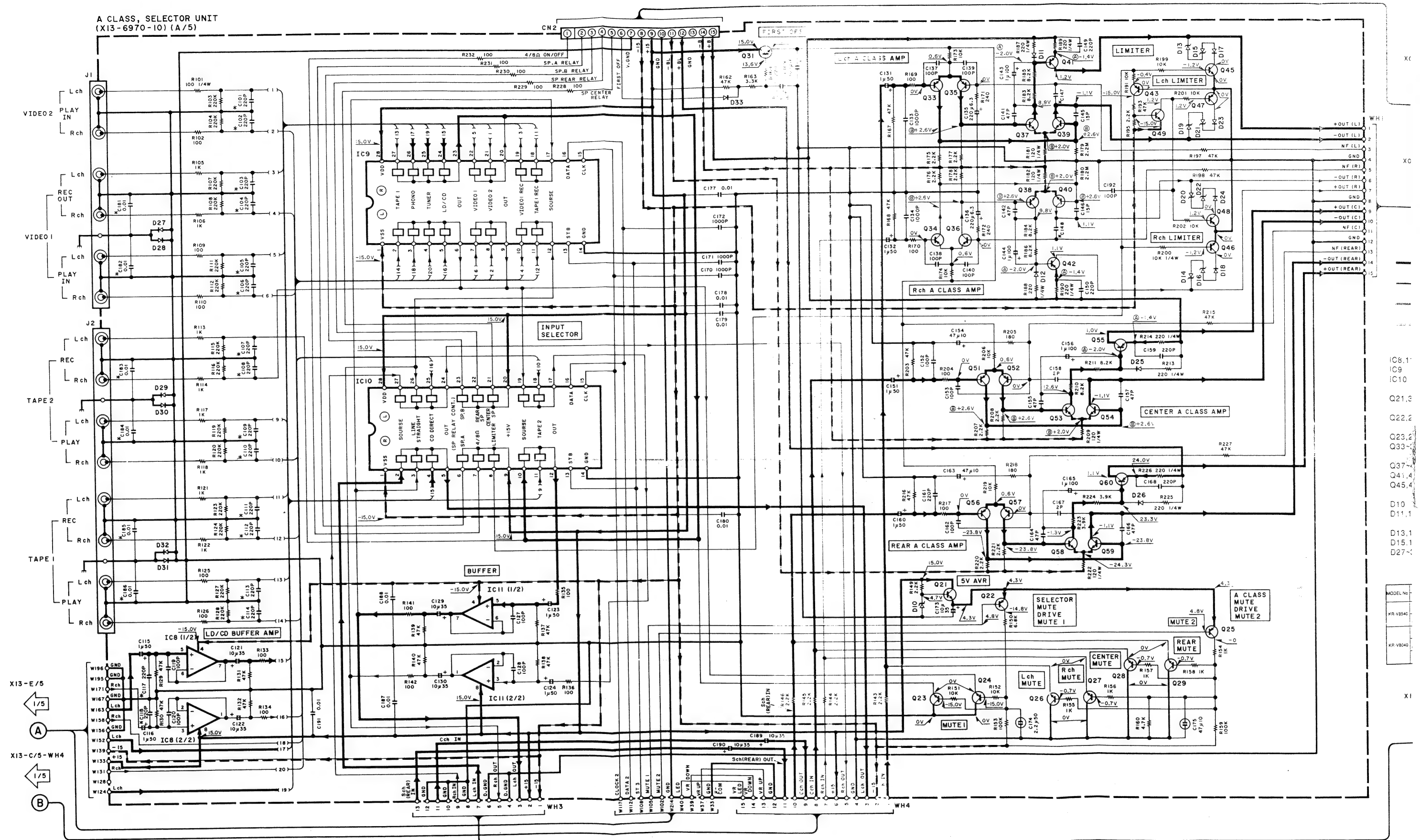
**CAUTION:** For continued safety, replace safety critical components only with manufacture's recommended parts (refer to parts list). ⚠ Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out. (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

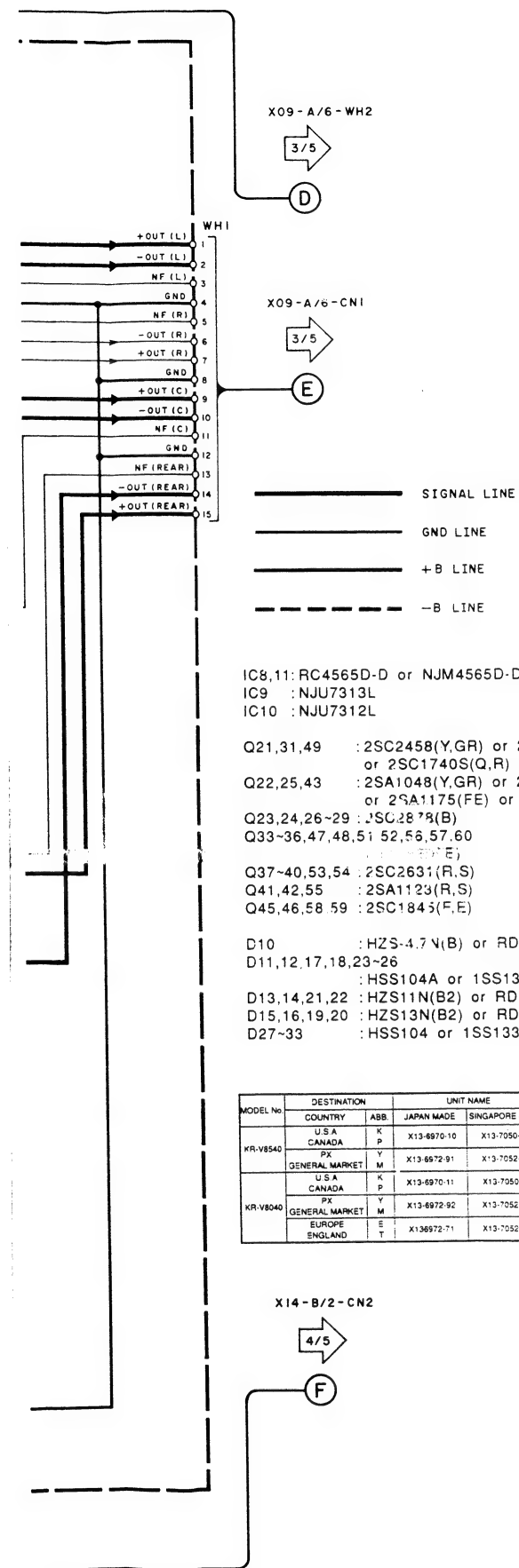
Y05-2610-10

KR-V8040/V8540 (1/6)

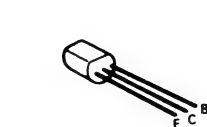
**KR-V8040/V8540**  
**KENWOOD**

A CLASS, SELECTOR UNIT  
(X13-6970-10) (A/5)

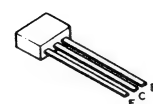




MODEL No.	DESTINATION		UNIT NAME		C101-106,109-114,181-186,117,118	C147,148
	COUNTRY	ABB.	JAPAN MADE	SINGAPORE MADE		
KR-V8540	U.S.A.	K	X13-6970-10	X13-7050-13	NO	2P
	CANADA	P	X13-6972-91	X13-7052-91	NO	2P
KR-V8040	FX	Y	X13-6970-11	X13-7050-11	NO	7P
	GENERAL MARKET	M	X13-6972-92	X13-7052-92	NO	7P
	U.S.A.	K	X13-6970-11	X13-7050-11	NO	7P
	CANADA	P	X13-6972-92	X13-7052-92	NO	7P
KR-V8040	FX	Y	X13-6972-92	X13-7052-92	NO	7P
	GENERAL MARKET	M	X13-6972-92	X13-7052-92	NO	7P
KR-V8040	EUROPE	E	X13-6972-71	X13-7052-71	YES	7P
	ENGLAND	T	X13-6972-71	X13-7052-71	YES	7P



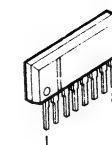
2SA1123  
2SA1284  
2SA992  
2SA999  
2SB764  
2SC1845  
2SC1923  
2SC2003  
2SC2631  
2SC2878  
2SD863



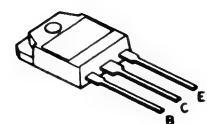
2SA1309A  
2SC3311A



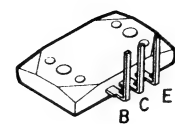
RC4565D-D



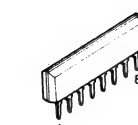
NJM4565L



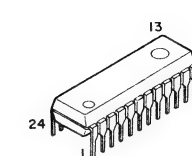
2SB1493BT  
2SD2255BT



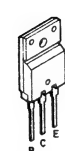
2SC2921LB



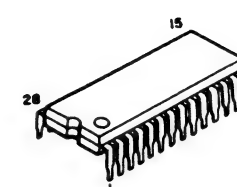
RC4565L



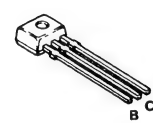
LC7218



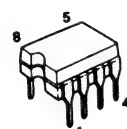
2SD2012



NJU7311L  
NJU7312L  
NJU7313L



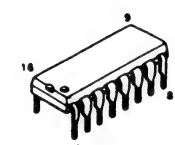
2SA1175  
2SC2785



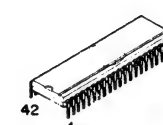
NJM4565D-D



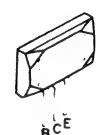
2SA1048  
2SA933S  
2SC1740S  
2SC2458



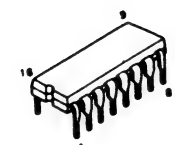
XR4028B



NJU3711D



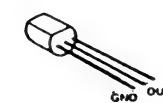
2SA1215LB



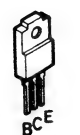
BA12004  
BA7626  
TC9213P



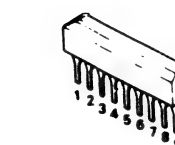
NJM78L05A



PST529C



2SA1535A  
2SC3944A  
2SD2061

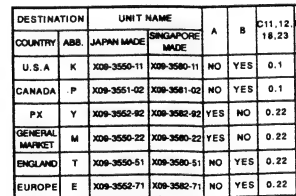
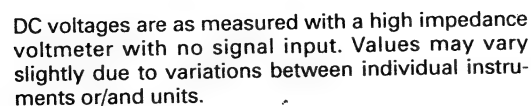


TA8403S

DC voltages are as measured with a high impedance voltmeter with no signal input. Values may vary slightly due to variations between individual instruments or/and units.

**CAUTION:** For continued safety, replace safety critical components only with manufacture's recommended parts (refer to parts list). Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out. (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.



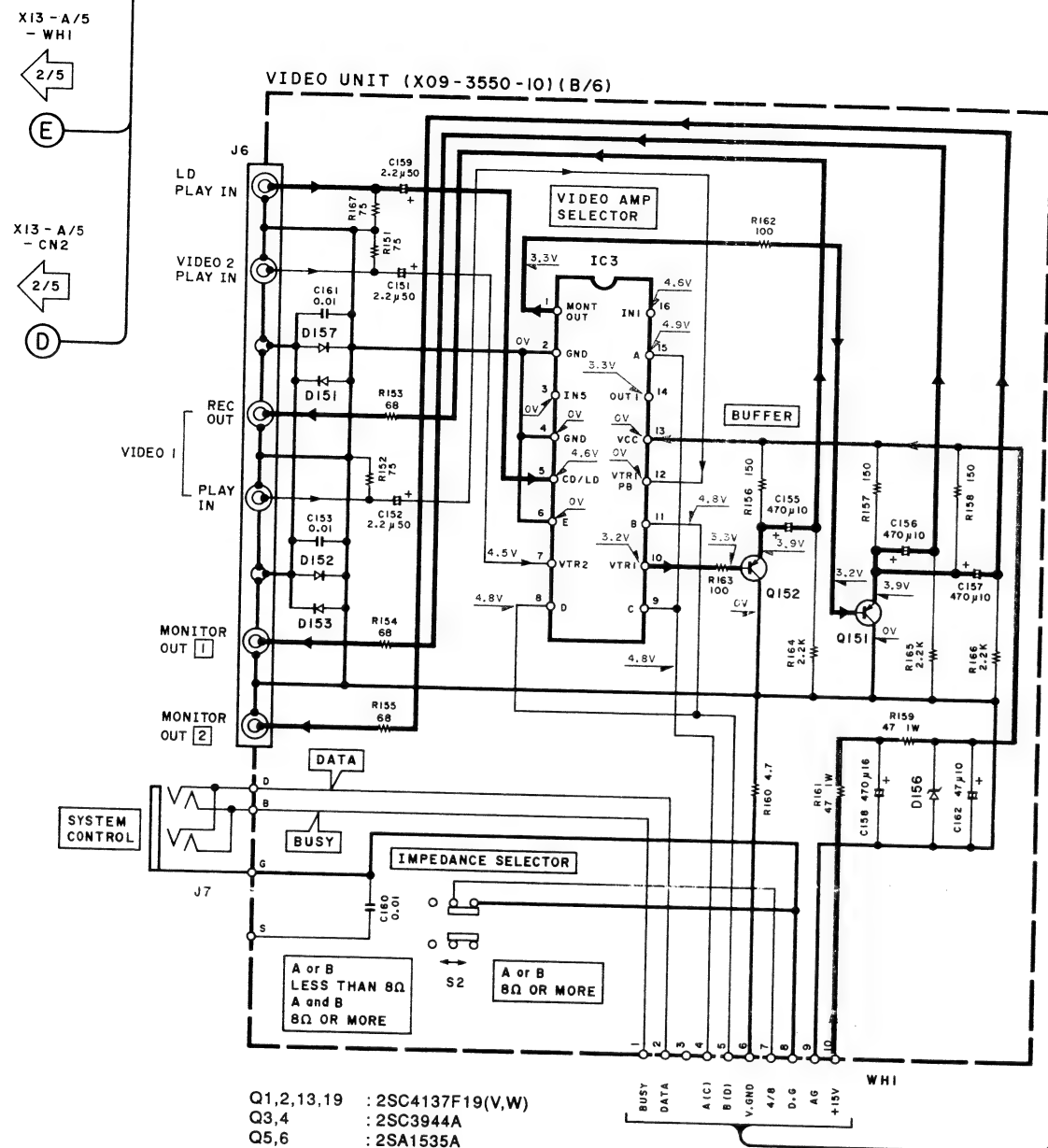


**CAUTION:** For continued safety, replace safety critical components only with manufacture's recommended parts (refer to parts list). ⚠ Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out. (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

# KR-V8040/V8540

## KENWOOD

ESTIMATION		UNIT NAME		A	B	C11, 12, 18, 23	C13, 17, 24	C43C39, C123	R133	W12	W20, 63 37, 181	W22	W112 124	J8	J9	WH7	F2	F3 CN15, 18	F4,5	F6,7
QUNTY	ASB.	JAPN MADE	SINGAPORE MADE																	
U.S.A	K	X09-3550-11	X09-3550-11	NO	YES	0.1	NO	NO	YES	YES	YES	YES	YES	NO	YES	NO	U/LSA125V	NO	ULSA125V	NO
ANADA	P	X09-3551-02	X09-3551-02	NO	YES	0.1	NO	NO	YES	YES	YES	YES	YES	NO	YES	YES	U/LSA125V	NO	ULSA125V	U/LT250V
P.X	Y	X09-3552-02	X09-3552-02	YES	NO	0.22	YES	NO	YES	NO	NO	YES	NO	YES	NO	YES	T2,SA250V	NO	T3,15A250V	T3,15A250V
GENERAL MARKET	M	X09-3550-22	X09-3550-22	YES	NO	0.22	YES	NO	NO	YES	NO	NO	YES	YES	NO	NO	T2,SA250V	NO	T3,15A250V	T3,15A250V
HOLLAND	T	X09-3550-51	X09-3550-51	NO	YES	0.22	YES	NO	NO	YES	NO	YES	YES	NO	NO	NO	T2,SA250V	NO	T3,15A250V	NO
EUROPE	E	X09-3552-71	X09-3552-71	NO	YES	0.22	YES	YES	NO	NO	NO	YES	YES	YES	NO	NO	T2,SA250V	YES	T3,15A250V	NO

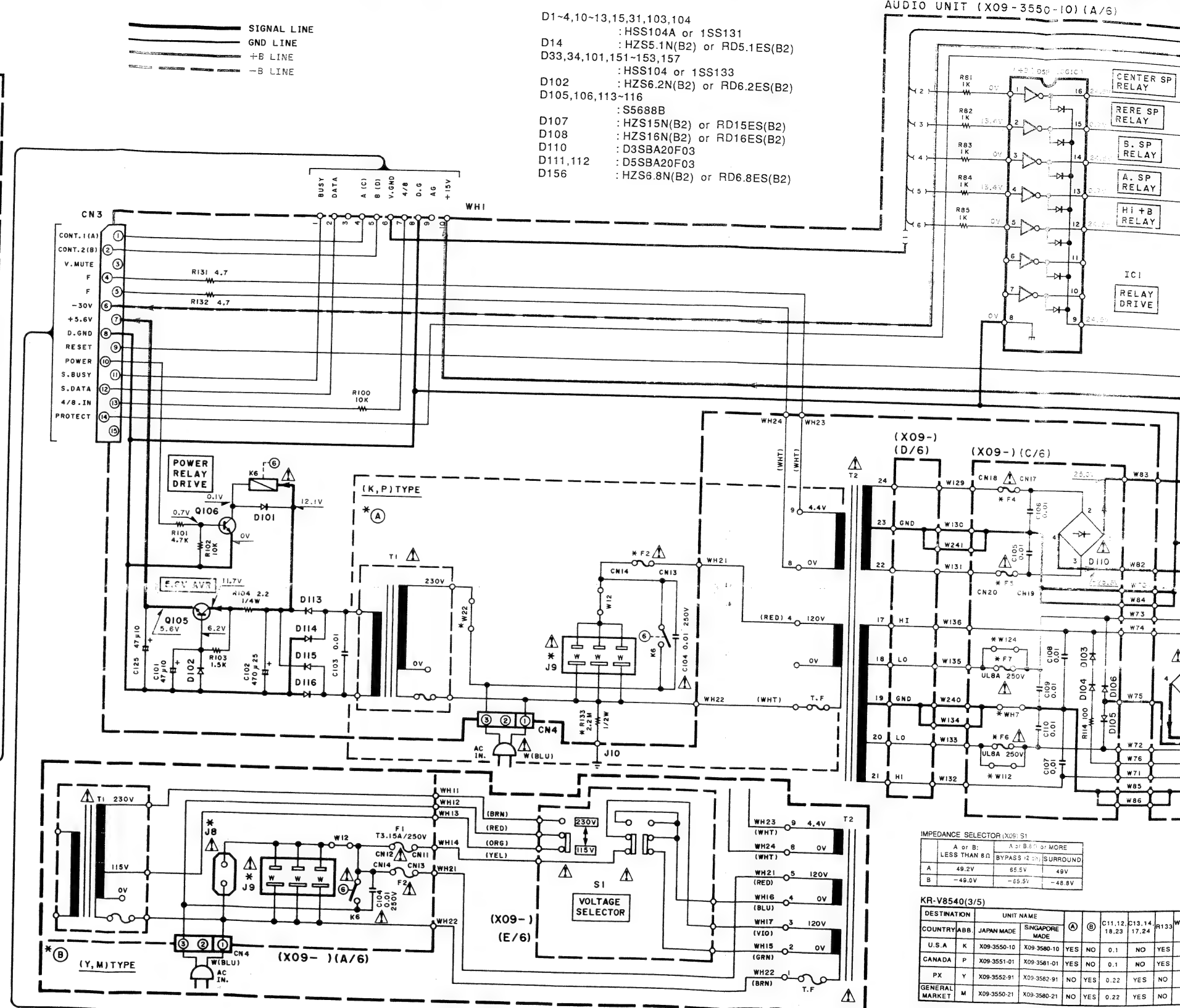


- Q1,2,13,19 : 2SC4137F19(V,W)  
 Q3,4 : 2SC3944A  
 Q5,6 : 2SA1535A  
 Q7,8 : 2SC2921LB  
 Q9,10 : 2SA1215LB  
 Q11,12,16,24 : 2SC2631(R,S)  
 Q14 : 2SB1560LB  
 Q15 : 2SD2390LB  
 Q17,18,22 : 2SC1845(F,E)  
 Q20 : 2SB1531BT  
 Q21 : 2SD2340BT  
 Q23 : 2SB764  
 Q25 : 2SA1123(R,S)  
 Q26,27 : 2SC2458(Y,GR) or 2SC3311A(Q,R)  
 or 2SC1740S(Q,R) or 2SC2785(F,E)  
 Q101,102 : 2SA1048(Y,GR) or 2SA1309A(Q,R)  
 or 2SA1175(F,E) or 2SA933S(Q,R)  
 Q103 : 2SD2012 or 2SD2061 or 2SD2374  
 Q104 : 2SA1284  
 Q105 : 2SD863  
 Q106 : 2SC2003(L,K)  
 Q151,152 : 2SA999

IC1 : BA12004  
 IC2 :  $\mu$ PC7815H or TA7815AP  
 IC3 : BA7626

RELAY ON	A or B: LESS THAN 8 $\Omega$ A and B: 8 $\Omega$ or MORE	A or B: 8 $\Omega$ or MORE
K1 or K2	A or B SP(FRONT) 4-8 $\Omega$	A or B SP(FRONT) 8-16 $\Omega$
K3	CENTER SP. 8-16 $\Omega$	CENTER SP. 8-16 $\Omega$
K4	SURROUND SP. 8-16 $\Omega$	SURROUND SP. 8-16 $\Omega$
K1,K2,K3	(BYPASS ONLY) A and B SP. 8-16 $\Omega$	

\*K5(RELAY ON)-HI TAP  $\pm$ DC



- D1-4,10-13,15,31,103,104 : HSS104A or 1SS131  
 D14 : HZS5.1N(B2) or RD5.1ES(B2)  
 D33,34,101,151-153,157 : HSS104 or 1SS133  
 D102 : HZS6.2N(B2) or RD6.2ES(B2)  
 D105,106,113-116 : S5688B  
 D107 : HZS15N(B2) or RD15ES(B2)  
 D108 : HZS16N(B2) or RD16ES(B2)  
 D110 : D3SBA20F03  
 D111,112 : D5SBA20F03  
 D156 : HZS6.8N(B2) or RD6.8ES(B2)

IMPEDANCE SELECTOR (X09-3550-10) (A/6)

A or B: LESS THAN 8 $\Omega$	A or B: 8 $\Omega$ or MORE
A : 49.2V	BYPASS 12V SURROUND
B : -49.0V	-65.5V -48.8V

KR-V8540(3/5)

DESTINATION		UNIT NAME		(A)	(B)	C11,12,18,23	C13,14,17,24	R133	W2
COUNTRY/ABB.	JAPAN MADE	SINGAPORE MADE							
U.S.A.	K	X09-3550-10	X09-3580-10	YES	NO	0.1	NO	YES	
CANADA	P	X09-3551-01	X09-3581-01	YES	NO	0.1	NO	YES	
PX	Y	X09-3552-91	X09-3582-91	NO	YES	0.22	YES	NO	
GENERAL MARKET	M	X09-3550-21	X09-3580-21	NO	YES	0.22	YES	NO	

**CAUTION:** For continued safety, replace safety critical components only with manufacture's recommended parts (refer to parts list).  $\Delta$  Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out. (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.





X13-A/5  
-WH3

2/5

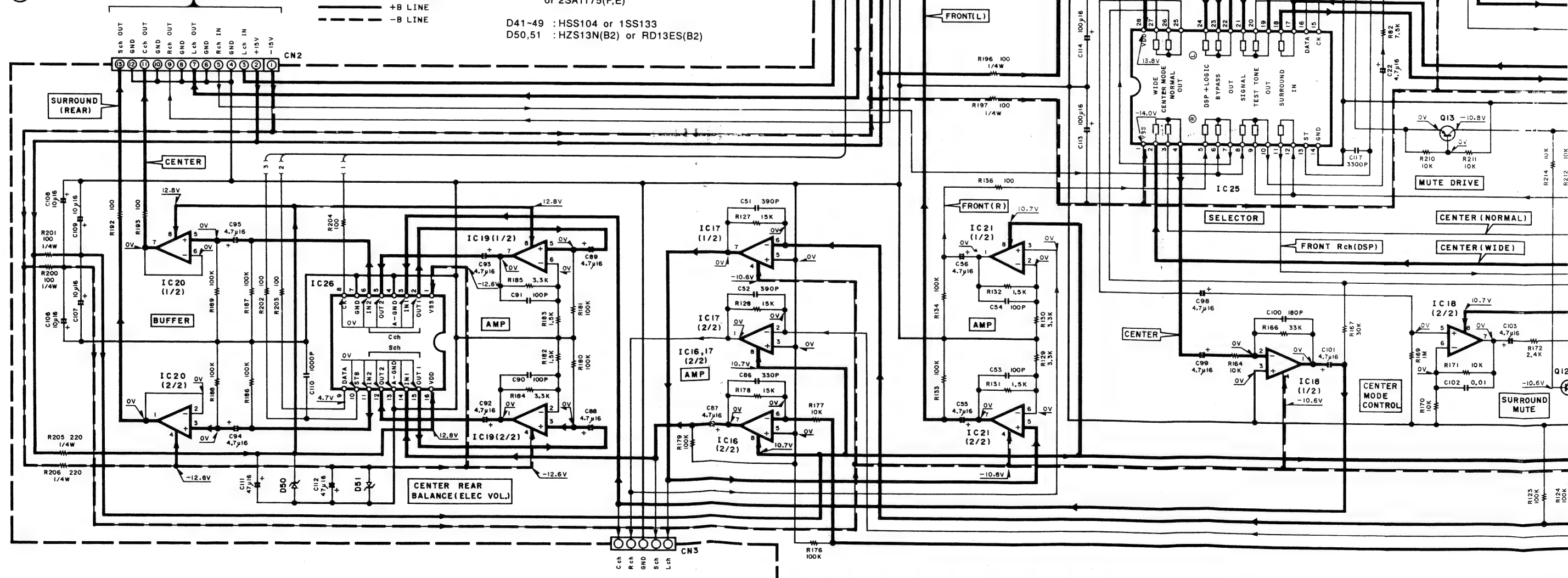
F

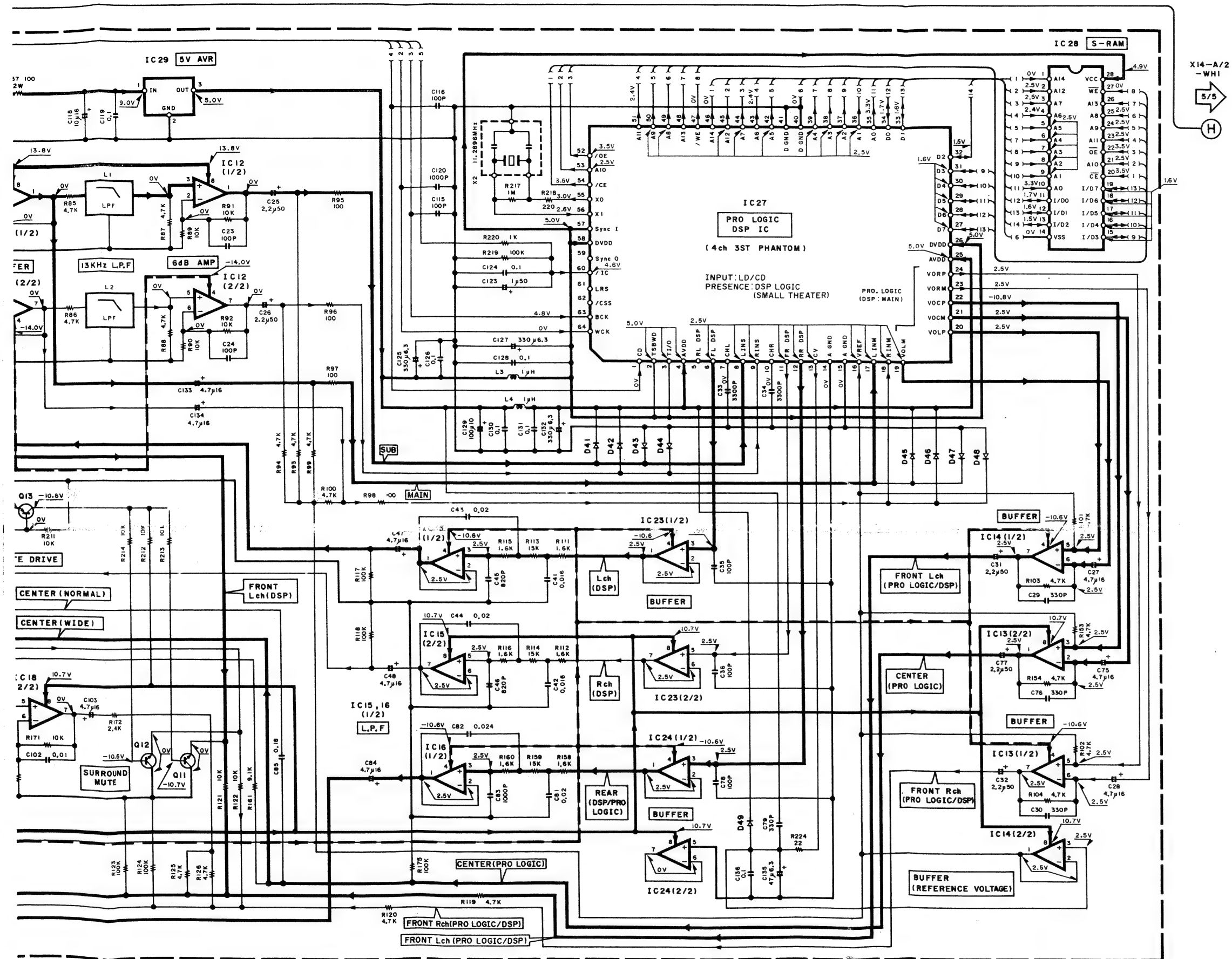
IC11-22 : RC4565L or NJM4565L  
IC23,24 : M5238L  
IC25 : NJU7311L  
IC26 : TC9213P  
IC27 : YSS215-F  
IC28 : HM65256BLFP-10  
IC29 : NJM78L05A

Q11,12 : 2SC2878(A,B)  
Q13 : 2SA1048(Y,GR)  
or 2SA1309A(Q,R)  
or 2SA933S(Q,R)  
or 2SA1175(F,E)

D41-49 : HSS104 or 1SS133  
D50,51 : HZS13N(B2) or RD13ES(B2)

SIGNAL LINE  
GND LINE  
+B LINE  
-B LINE



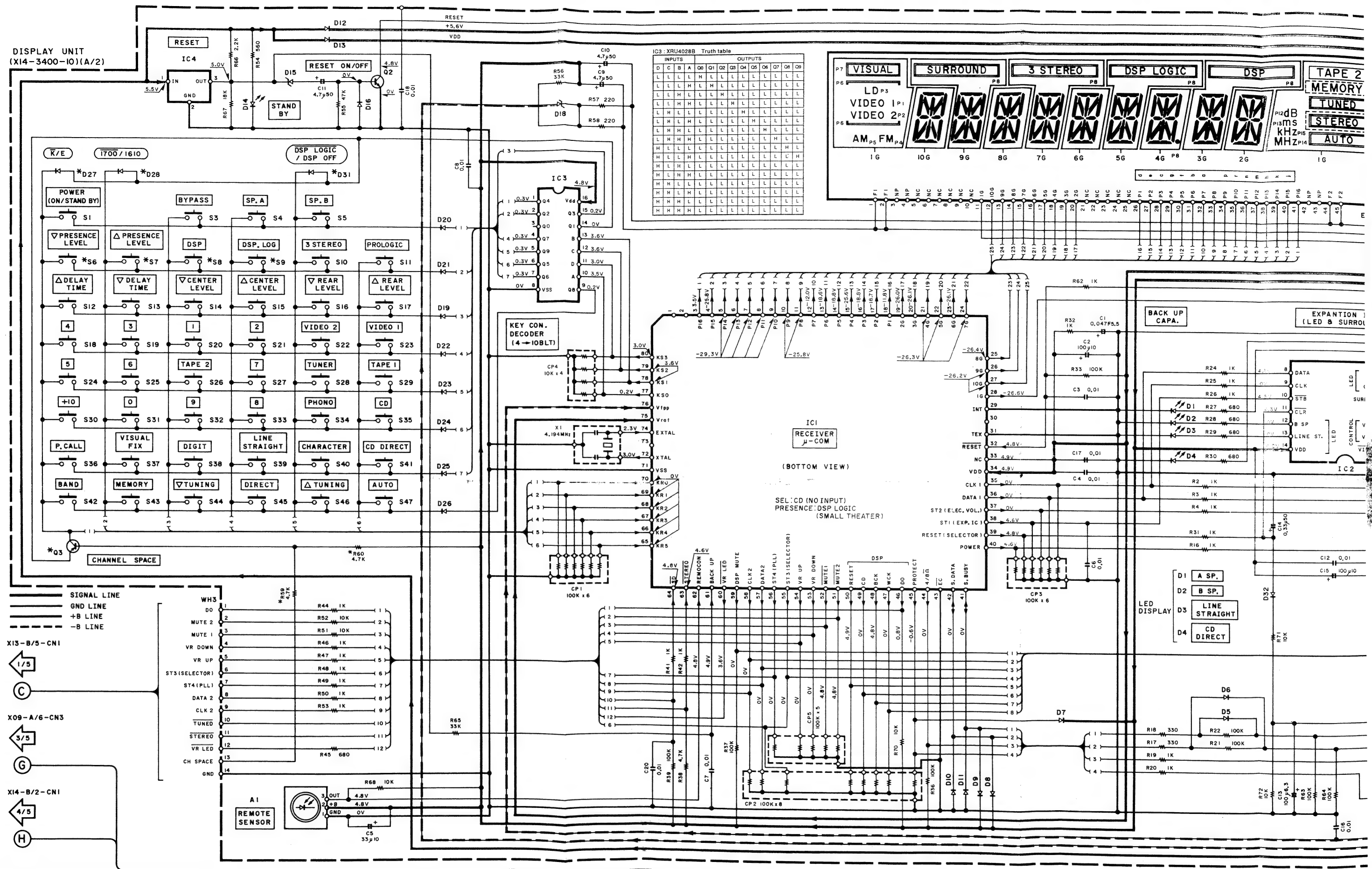


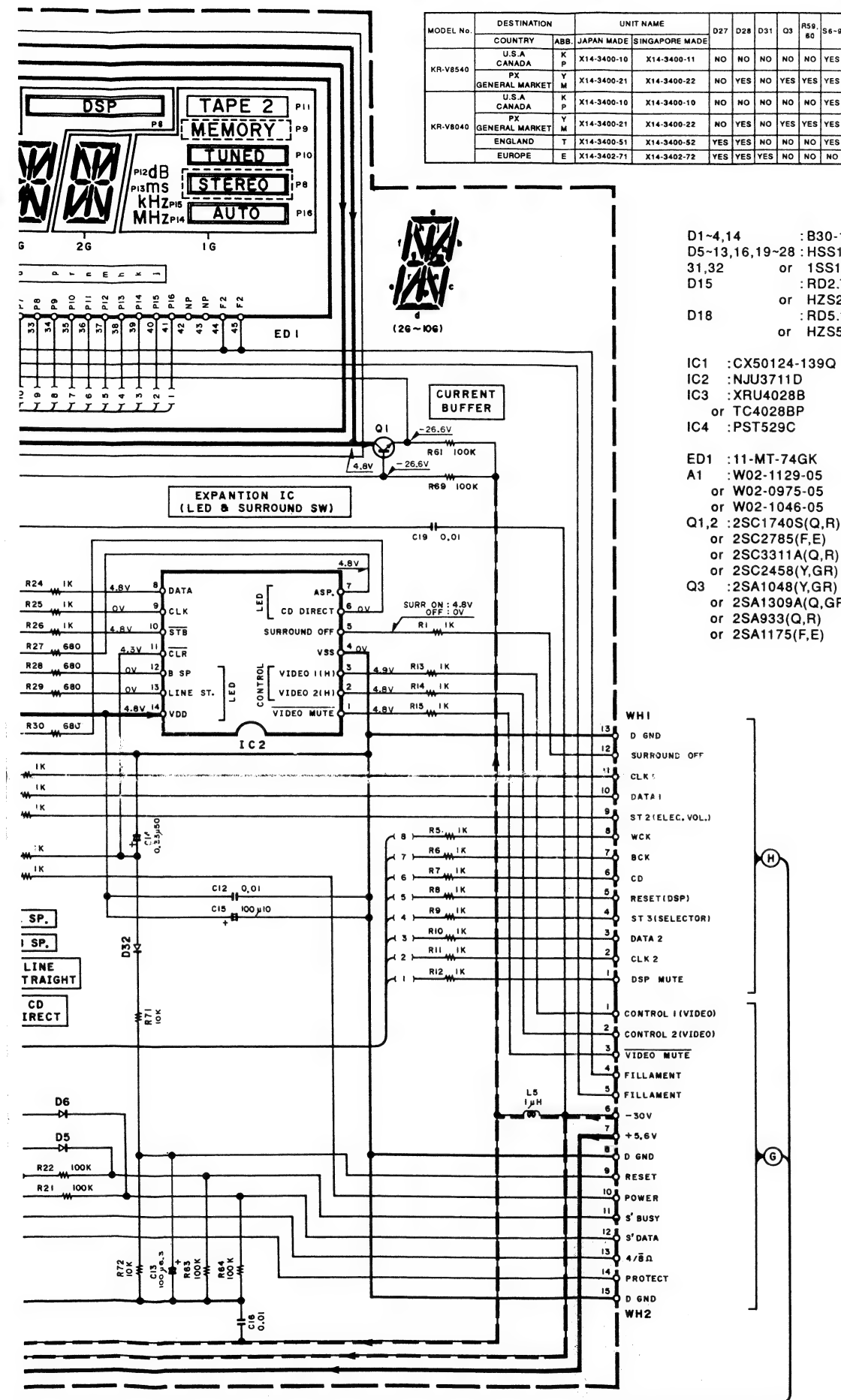
Y05-2610-10

KR-V8040/V8540 (5/6)

**KR-V8040/V8540**  
KENWOOD








Y05-2610-10

DC voltages are as measured with a high impedance voltmeter with no signal input. Values may vary slightly due to variations between individual instruments or/and units.

**CAUTION:** For continued safety, replace safety critical components only with manufacture's recommended parts (refer to parts list).  Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out. (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

KR-V8040/V8540 (6/6)

**KR-V8040/V8540**  
**KENWOOD**

## EXPLODED VIEW





✖ New Parts

Parts without Parts No. are not supplied.  
Les articles non mentionnés dans le Parts No. ne sont pas fournis.  
Teile ohne Parts No. werden nicht geliefert.

No. 1

Ref. No. 参照番号	Address 位置	New Part 部品番号	Description 部品名 / 規格	Desti- nation 仕向	Re- marks 備考
KR - V8040 (JAPAN MADE)					
601	1A	* A01-1829-11	METALLIC CABINET	KPYMT E	S
602	1B	* A09-0115-13	BATTERY COVER		
603	3B	* A22-1542-12	SUB PANEL ASSY		
604	3A	* A22-1544-12	SUB PANEL ASSY		
605	3A	* A60-0168-02	PANEL	KPYMT	S
606	3A	* A60-0216-02	PANEL		
607	1A	* X94-1000-41	REMOTE CONTROL ASSY UNIT		
608	3A	* B07-1999-02	ESCUTCHEON		
609	3A	* B07-1999-02	FRONT GLASS	KPYMT E	S
610	3B	* B10-1904-03	KENWOOD BADGE		
611	3A	* B43-0287-04	WARRANTY CARD		
612	3A	* B46-0092-13	WARRANTY CARD		
-	-	* B46-0094-03	WARRANTY CARD	KPYMT E	S
-	-	* B46-0095-03	WARRANTY CARD		
-	-	* B46-0096-33	WARRANTY CARD		
-	-	* B46-0121-13	WARRANTY CARD		
-	-	* B46-0122-23	WARRANTY CARD	KPYMT E	S
-	-	* B46-0143-13	WARRANTY CARD		
-	-	* B46-0197-00	QUESTIONAIRE CARD		
-	-	* B58-0513-04	CAUTION CARD (PRESET220-240)		
-	-	* B60-0719-00	INSTRUCTION MANUAL(ENGLISH)	KPYMT E	S
-	-	* B60-0720-00	INSTRUCTION MANUAL(ENGLISH)		
-	-	* B60-0721-00	INSTRUCTION MANUAL(FRENCH)		
-	-	* B60-0722-00	INSTRUCTION MANUAL(F,G,D)		
-	-	* B60-0723-00	INSTRUCTION MANUAL(SP,CH)	KPYMT E	S
610	1B	* B60-0725-05	AC PLUG		
611	1B	* B60-0725-05	AC PLUG ADAPTOR		
612	1D	* B30-2592-15	AC POWER CORD		
612	1D	* B30-2592-15	AC POWER CORD	KPYMT E	S
612	1D	* B30-2605-05	AC POWER CORD		
612	1D	* B30-2605-05	AC POWER CORD		
612	1D	* B30-2650-05	AC POWER CORD		
613	2C	* F20-1284-05	INSULATING BOARD	KPYMT E	S
614	2C	* F20-1297-05	INSULATING SHEET		
615	3C	* G10-0148-04	NON-MOVEN FABRIC		
615	3C	* G11-2119-04	SOFT TAPE		
-	-	* H10-5954-02	POLYSTYRENE FOAMED FIXTURE	KPYMT E	S
-	-	* H10-5955-02	POLYSTYRENE FOAMED FIXTURE		
-	-	* H25-0225-04	PROTECTION BAG (335X350X0.03)		
-	-	* H25-0252-04	PROTECTION BAG (335X350X0.03)		
-	-	* H25-0651-04	PROTECTION BAG (0232 PRINTED)	KPYMT E	S
-	-	* H25-0654-04	PROTECTION BAG (0232 PRINTED)		
-	-	* H50-0218-04	ITEM CARTON CASE		
-	-	* J02-1034-05	FOOT		
620	3C,3D	* J19-2815-04	ANTENNA HOLDER	KPYMT E	S
621	1B	* J19-2815-04	POWER CORD BUSHING		
625	1D	* J42-0083-05	WIRE BAND		
625	1D	* J61-0307-05	WIRE BAND		
626	3B	* K39-3532-04	KNOB(Loudness, Balance)	KPYMT E	S
627	3B	* K39-4116-02	KNOB(VOLUME CONTROL)		
628	3A	* K39-4347-04	KNOB(1-10, INPUT SELECTOR)		
629	2A	* K39-4347-04	KNOB(BASS, TREBLE)		

## PARTS LIST

No. 6

※ New Parts  
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Teile ohne Parts No. werden nicht geliefert.

Ref. No. 参照番号	Address 位置	Parts No. 部品番号	Description 部品名 / 規格	Re- marks 仕
C29		CE04KW1V100M	ELECTR0	E
C30		CK45FF1H103Z	CERAMIC	
C39		CK45FF1H103Z	CERAMIC	
C40		CE04KW1A470M	ELECTR0	
C101		CE04KW1E471M	ELECTR0	
C102				
C103		CK45FF1H103Z	CERAMIC	
C104		C91-1439-05	FILM	
C105		CK45FF1H103Z	CERAMIC	
C109		CK45FE2H103P	CERAMIC	
C111		CE04KW1V332M	ELECTR0	
C112				
C113		CF92FV1H104J	MF	
C114		C90-1870-05	7500UF	
C115		CE04KW1J470M	ELECTR0	
C117		CE04KW1V471M	ELECTR0	
C118		CE04KW1C331M	ELECTR0	
C119				
C120		CE04KW1C101M	ELECTR0	
C121		CK45FB1H102K	CERAMIC	
C122		CE04KW1E470M	ELECTR0	
C123		CK45FF1H103Z	CERAMIC	
C125		CE04KW1A470M	ELECTR0	
C151		CE04KW1H2R2M	ELECTR0	
C152		CK45FF1H103Z	CERAMIC	
C153		CE04KW1A471M	ELECTR0	
C155		CE04DW1C471M	ELECTR0	
C158		CE04KW1H2R2M	ELECTR0	
C159				
C160		CE04FF1H103Z	CERAMIC	
C162		CE04KW1A470M	ELECTR0	
J1	2B	E11-0208-05	PHONE JACK (PHONES)	E
J2	1C	E70-0015-05	LOCK TERMINAL BOARD (F.SP.)	KPYMT
J3	1C	E70-0020-05	LOCK TERMINAL BOARD (C.R.SP.)	KPYMT
J4	1C	E70-0001-05	LOCK TERMINAL BOARD (C.R.SP.)	E
J6	1D	E63-0039-05	PHONE JACK (L.D.VIDEO, MONITOR)	
J7	1D	E11-0188-05	MINIATURE PHONE JACK (S.COUNT.)	
J8	1C	E03-0108-05	AC BUTLET	ME
J9	1C	E03-0109-05	AC BUTLET	KPY
F1		F05-2525-05	FUSE (SEMK0)	YM
F2		F04-5022-05	FUSE (UL)	KP
F3		F05-2525-05	FUSE (SEMK0)	YMTB
F4		F05-2525-05	FUSE (SEMK0)	E
F5		F04-5022-05	FUSE (UL)	KP
F6		F05-3121-05	FUSE (SEMK0)	YMET
F7		F05-7026-05	FUSE (UL)	P
CN11		J13-0075-05	FUSE CLIP	YMT
CN13		J13-0075-05	FUSE CLIP	E
CN15		J13-0075-05	FUSE CLIP	P
CN17		J13-0075-05	FUSE CLIP	
CN21		J13-0055-05	FUSE CLIP	
L1		L39-0085-05	PHASE-COMPENSATION COIL	KP
T1		L01-7651-05	POWER TRANSFORMER	YM
T1		L01-7653-05	POWER TRANSFORMER	ET
T1		L01-7657-05	POWER TRANSFORMER	

△ indicates safety critical components.

KUSA P-Canada  
T-England E-Europe  
X-Australia M-Other Areas

L-Scandinavia  
Y-PX(Far East, Hawaii)  
V-AFES(Europe)

No. 5

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Teile ohne Parts No. werden nicht geliefert.

Ref. No. 参照番号	Address 位置	Parts No. 部品番号	Description 部品名 / 規格	Re- marks 仕
614	2C	F20-1297-05	INSULATING SHEET	
615	3C	G10-0148-04	NON-WOVEN FABRIC	
619	1B	G16-0773-08	WRITING SHEET	
		G11-2119-04	SOFT TAPE	
		H10-5281-02	POLYSTYRENE FOAMED FIXTURE	S
		H10-5282-02	POLYSTYRENE FOAMED FIXTURE	S
		H25-0225-04	PROTECTION BAG (850X450X0.03)	
		H25-0232-04	PROTECTION BAG (235X350X0.03)	
		H50-0287-04	ITEM CARTON CASE	KPY
		H50-0315-04	ITEM CARTON CASE	M
620	3C, 3D	J02-1034-05	FOOT	
621	1B	J19-2815-04	ANTENNA HOLDER	
625	1D	J42-0083-05	POWER CORD BUSHING	
		J61-0307-05	WIRE BAND	
626	3B	K29-3632-04	KN08 (LOUDNESS, BALANCE)	
627	3B	K29-4110-04	KN08 (VOLUME, CONTROL)	
628	3A	K29-4345-02	KN08 (1-0, *10, INPUT SELECTOR)	
629	2A	K29-4347-04	KN08 (BASS, TREBLE)	
630	1B	L07-0499-05	POWER TRANSFORMER	K
630	1B	L07-0500-05	POWER TRANSFORMER	YM
630	1B	L07-0501-05	POWER TRANSFORMER	P
		N09-1445-05	SET SCREW (M3X8)	
A	3A	N09-0333-05	TAPPING SCREW (3X12)	
B	1C, 2C	N89-3008-45	BINDING PEST TAPITE SCREW	
C	1A, 1D	N08-0128-35	BINDING PEST (CND)	
D	1D	N89-3008-46	BINDING HEAD TAPITE SCREW	
E	1C			
F	1C, 3C	N86-4006-46	BINDING HEAD TAPITE SCREW	
635	1B	T90-0174-05	LOOP ANTENNA	
636	1B	T90-0175-05	T TYPE ANTENNA	
AUDIO UNIT (KR-V8040 : X09-3550-11)				
C1		CE04KW2A100M	ELECTR0	
C2		CE04KW2A101M	ELECTR0	
C3		CE04KW1H470M	ELECTR0	
C5		CK45FF1H103Z	CERAMIC	
C9		CK45FB1H222K	CERAMIC	
C11		CF92FV1H104J	MF	KP
C11		CF92FV1H224J	MF	YMET
C13		CK45FB1H224J	CERAMIC	YMET
C15		CK45FF1H103Z	CERAMIC	
C17		CF92FV1H224J	MF	YMET
C18		CF92FV1H104J	MF	KP
C18		CF92FV1H224J	MF	YMET
C19		CK45FB1H222K	CERAMIC	
C20		CK45FF1H103Z	CERAMIC	
C22		CK45FB1H103J	CERAMIC	
C23		CF92FV1H104J	MF	KP
C23		CF92FV1H224J	MF	YMET
C24		CF92FV1H224J	MF	YMET
C25		CE04KW2A221M	ELECTR0	
C26		CE04KW2A221M	ELECTR0	
C26		CE04KW2A221M	ELECTR0	
C27				
C28		CE04KW2A4R7M	ELECTR0	

S : SINGAPORE MADE

KUSA P-Canada  
T-England E-Europe  
X-Australia M-Other Areas

L-Scandinavia  
Y-PX(Far East, Hawaii)  
V-AFES(Europe)

△ indicates safety critical components.



## PARTS LIST

\* New Parts

Parts without Parts No. are not supplied.

Les articles non mentionnés dans le Parts No. ne sont pas fournis.

Telle ohne Parts No. werden nicht geliefert.

No. 7

Ref. No. 参照番号	Address 位置	Parts No. 部品番号	Description 部品名 / 規格	Desti- nation 仕
E	1C	N89-3008-46	BINDING HEAD TAPITE SCREW	
G	1B	N89-3012-46	PAN HEAD TAPITE SCREW	
H	1C	N30-3008-46		
CP1, 2		R90-0888-05	COMPOSITE ELEMENTS 0.33X2 5W	
CP3		R90-0886-05	COMPOSITE ELEMENTS 0.47X2 5W	
CP4		R90-0888-05	COMPOSITE ELEMENTS 0.33X2 5W	
R9 - 12		RD14NB2E750J	75 1/4W	
R21, 22		RD14NB2E822J	8.2K J 1/4W	
R25, 26		RS14KB3D4R7J	FL-PROOF RS 4.7 J 2W	
R31		RD14NB2E220J	RD 22 J 1/4W	
R32 - 34		RD14NB2E470J	RD 47 J 1/4W	
R41, 42		RD14NB2E470J	RD 47 J 1/4W	
R45		RS14KB3D4R7J	FL-PROOF RS 4.7 J 2W	
R46		RD14NB2E822J	RD 8.2K J 1/4W	
R54, 55		RD14NB2E470J	RD 47 J 1/4W	
R57		RD14NB2E822J	RD 8.2K J 1/4W	
R60		RS14DB3A4R7J	FL-PROOF RS 4.7 J 1W	
R72, 73		RD14NB2E100J	RD 10 J 1/4W	
R74, 75		RS14KB3D561J	FL-PROOF RS 560 J 2W	
R76, 77		RD14NB2E100J	RD 10 J 1/4W	
R104		RD14NB2E2R2J	RD 2.2 J 1/4W	
R106		RD14NB2E100J	RD 10 J 1/4W	
R111		RD14NB2E101J	RD 100 J 1/4W	
R114		RD14NB2E101J	RD 100 J 1/4W	
R125		RS14KB3D331J	FL-PROOF RS 330 J 2W	
R126		RD14NB2E4R7J	RD 4.7 J 1/4W	
R133		R92-0173-05	RC 2.2M M 1/2W	
R159		RS14DB3A470J	FL-PROOF RS 47 J 1W	KP
R161		RS14DB3A470J	FL-PROOF RS 47 J 1W	
VR1 - 3		R12-1617-05	TRIMMING POT(2.2K)(IDLE CUR.)	
K1, 2		S51-2078-05	MAGNETIC RELAY(A,B SP. ON/OFF)	
K1, 2		S51-2092-05	MAGNETIC RELAY(A,B SP. ON/OFF)	
K3, 4		S76-0005-05	MAGNETIC RELAY(C,R SP. ON/OFF)	
K5		S76-0016-05	MAGNETIC RELAY(CH1 +B ON/OFF)	
K5		S76-0017-05	MAGNETIC RELAY(CH1 +B ON/OFF)	
K6		S76-0002-05	MAGNETIC RELAY(POWER ON/OFF)	
S1	1C	S31-3010-05	SLIDE SWITCH(VOLTAGE SELECTOR)	YM
S2	1D	S31-2094-05	SLIDE SWITCH(IMPEDANCE SELECT)	
D1 - 4		HSS104A	DIODE	
D1 - 4		1SS131	DIODE	
D10 - 13		HSS104A	DIODE	
D10 - 13		1SS131	DIODE	
D14		HSS104A	ZENER DIODE	
D14		HSS104A	ZENER DIODE	
D15		1SS131	DIODE	
D16 - 19		HSS104A	DIODE	
D16 - 19		1SS133	DIODE	
D22 - 25		HSS104A	DIODE	
D22 - 25		1SS133	DIODE	
D28, 29		HSS104A	DIODE	
D28, 29		1SS133	DIODE	
D31		HSS104A	DIODE	

L:Scandinavia  
Y:PX(Far East, Hawaii)  
Y:AFES(Europe)  
K:USA  
T:England  
X:Australia  
P:Canada  
E:Europe  
M:Other Areas

△ indicates safety critical components

No. 8

Ref. No. 参照番号	Address 位置	Parts No. 部品番号	Description 部品名 / 規格	Desti- nation 仕
D31		1SS131	DIODE	
D33, 34		HSS104A	DIODE	
D33, 34		1SS133	DIODE	
D101		HSS104A	DIODE	
D101		1SS133	DIODE	
D102		HZ56-2N(B2)	ZENER DIODE	
D102		HSS125S(B2)	ZENER DIODE	
D103, 104		1SS131	DIODE	
D103, 104		1SS133	DIODE	
D105, 106		S5688B	DIODE	
D107		HZ515N(B2)	ZENER DIODE	
D107		HZ515N(B2)	ZENER DIODE	
D108		HZ515N(B2)	ZENER DIODE	
D108		HZ515N(B2)	ZENER DIODE	
D110		D35BA20F03	DIODE	
△ D111, 112		D55BA20F03	DIODE	
△ D113-116		S5688B	DIODE	
D151-153		HSS104A	DIODE	
D151-153		1SS133	DIODE	
D156		HZ56-8N(B2)	ZENER DIODE	
D156		RD6-8BS(B2)	ZENER DIODE	
D157		HSS104A	DIODE	
D157		1SS133	DIODE	
IC1		BA12004	IC(7CH TRANSISTOR ARRAY)	
IC2		TA7815AP	IC(VOLTAGE REGULATOR/ +15V)	
IC2		UPT7815H	IC(VOLTAGE REGULATOR/ +15V)	
IC3		BA7626	IC(VIDEO SIGNAL SELECTOR)	
Q1, 2		2SC4137F19(V,W)	TRANSISTOR	
Q7, 8		2SD2222BT	TRANSISTOR	
Q9, 10		2SD1470BT	TRANSISTOR	
Q11, 12		2SC2631(R,S)	TRANSISTOR	
Q13		2SC4137F19(V,W)	TRANSISTOR	
△ Q14		2SB1493BT	TRANSISTOR	
△ Q14		2SB1493BT*1	TRANSISTOR	
△ Q15		2SD2255BT	TRANSISTOR	
△ Q15		2SD2255BT*1	TRANSISTOR	
Q16		2SC2631(R,S)	TRANSISTOR	
Q17, 18		2SC1845(F,E)	TRANSISTOR	
Q19		2SC4137F19(V,W)	TRANSISTOR	
△ Q20		2SB1531BT	TRANSISTOR	
△ Q21		2SD2340BT	TRANSISTOR	
Q22		2SC1845(F,E)	TRANSISTOR	
Q23		2SB764	TRANSISTOR	
Q24		2SC2631(R,S)	TRANSISTOR	
Q25		2SA1123(R,S)	TRANSISTOR	
Q26, 27		2SC1740S(Q,R)	TRANSISTOR	
Q26, 27		2SC2458(Y,GR)	TRANSISTOR	
Q26, 27		2SC2785(F,E)	TRANSISTOR	
Q26, 27		2SC3311A(Q,R)	TRANSISTOR	
Q101, 102		2SA1048(Y,GR)	TRANSISTOR	
Q101, 102		2SA1175(F,E)	TRANSISTOR	
Q101, 102		2SA1309A(Q,R)	TRANSISTOR	
Q101, 102		2SA933S(Q,R)	TRANSISTOR	
Q103		2SD2012	TRANSISTOR	
Q103		2SD2061	TRANSISTOR	

L:Scandinavia  
Y:PX(Far East, Hawaii)  
Y:AFES(Europe)  
K:USA  
T:England  
X:Australia  
P:Canada  
E:Europe  
M:Other Areas

△ indicates safety critical components

## PARTS LIST

**No. 10**

x New Parts  
Parts without **Parts No.** are not supplied.  
Les articles non mentionnés dans le **Parts No.** ne sont pas fournis.  
Teile ohne **Parts No.** werden nicht geliefert.

Ref. No. 参照番号	Address New 位置新	Parts No. 部品番号	Description 部品名 / 規格	Re- marks 備考
J3	1C	E13-0633-05	PHONE JACK(PRE OUT)	
J4	1C	E70-0001-05	LOCK TERMINAL BOARD(C.R.SP.)	
J6	1D	E63-0039-05	PHONE JACK(LD.VIDEO MONITOR)	
J7	1D	E11-0188-05	MINIATURE PHONE JACK(S.CONT.)	M
J8	1C	E03-0108-05	AC OUTLET	KPY
J9	1C	E03-0111-05	AC OUTLET	
F1		F05-3121-05	FUSE (SEMØ) (250V T3.15A)	YM
F2		F05-3121-05	FUSE (SEMØ) (250V T3.15A)	YM
F2		F05-6029-05	FUSE (UL) (125V 6A UL)	KP
F4	5	F04-5022-05	FUSE (UL) (125V 3A UL)	KP
F4	5	F05-3121-05	FUSE (SEMØ) (250V T3.15A)	YM
F6	7	F05-6321-05	FUSE (SEMØ) (250V T6.3A)	YM
F6	7	F05-8029-05	FUSE (UL) (250V 9A)	P
CN11.12		J13-0075-05	FUSE CLIP	YM
CN13.14		J13-0075-05	FUSE CLIP	
CN17-20		J13-0075-05	FUSE CLIP	
CN21-24		J13-0055-05	FUSE CLIP	P
L1	-4	L39-0085-05	PHASE-COMPENSATION COIL	
T1		L01-7651-05	POWER TRANSFORMER	KP
T1		L01-7653-05	POWER TRANSFORMER	YM
E	1C	N89-3008-46	BINDING HEAD TAPITIE-SCREW	
E	1B	N69-3012-46	BINDING HEAD TAPITIE-SCREW	
H	1C	N30-3008-46	PAN HEAD MACHIN SCREW	
CP1.2		R90-0840-05	COMPOSITE ELEMENTS 0.22X2 5W	
CP3		R90-0886-05	COMPOSITE ELEMENTS 0.47X2 5W	
CP4		R90-0840-05	COMPOSITE ELEMENTS 0.22X2 5W	
R9	-12	RD14N82E750J	RD 75 J 1/4W	
R13	-16	RD14N82E221J	RD 220 J 1/4W	
R17	-20	RD14N82E282J	RD 2.2 J 1/4W	
R21	22	RD14N82E22J	RD 8.2K J 1/4W	
R25	26	RS14K83D4R7J	FL-PROOF RS 4.7 J 2W	
R31		RD14N82E220J	RD 22 J 1/4W	
R32	-34	RD14N82E470J	RD 47 J 1/4W	
R41	42	RD14N82E470J	RD 47 J 1/4W	
R45		RS14K83D4R7J	FL-PROOF RS 4.7 J 2W	
R46		RD14N82E22J	RD 22 J 1/4W	
R54	55	RD14N82E470J	RD 47 J 1/4W	
R57		RD14N82E22J	RD 22 J 1/4W	
R60		RS14DB3A4R7J	FL-PROOF RS 4.7 J 1W	
R72	73	RD14N82E100J	RD 10 J 1/4W	
R74	75	RS14K83D561J	FL-PROOF RS 560 J 2W	
R76	77	RD14N82E100J	RD 10 J 1/4W	
R104		RD14N82E282J	RD 2.2 J 1/4W	
R106		RD14N82E100J	RD 10 J 1/4W	
R111		RD14N82E100J	RD 100 J 1/4W	
R114		RD14N82E101J	RD 100 J 1/4W	
R125		RS14K83D331J	FL-PROOF RS 330 J 2W	
R126		RD14N82E47J	RD 4.7 J 1/4W	KP
R133		R22-0173-05	RC 2.2M J 1/2W	
R159		RS14DB3A470J	FL-PROOF RS 47 J 1W	
R161	-3	RS14DB3A470J	FL-PROOF RS 47 J 1W	
		R12-1616-05	TRIMMING POT(1K)(IDLE CURRENT)	

**K**USA      **P**Canada  
**T**England      **E**Europe  
**X**Australia      **M**Other Areas

## No. 9

× New Parts  
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Teile ohne **Parts No.** werden nicht geliefert.

Ref. No. 参照番号	Address 位置	New Part 新番	Parts No. 部品番号	Description 部品名 / 規格	Destination 仕向	Remarks 備考
Q103		*	2SD2374	TRANSISTOR		
Q104			2SA1284	TRANSISTOR		
Q105			2SD863	TRANSISTOR		
Q106			2SC2003(L,K)	TRANSISTOR		
Q151, 152			2SA9399	TRANSISTOR		
AUDIO UNIT (KR - V8540 : X09 - 3550 - 10)						
C1			CE04KW2A100M	ELECTRØ	100F	100W
C2			CE04KW2A101M	ELECTRØ	100UF	100W
C3	4		CE04KW1A470M	ELECTRØ	470F	50W
C4	5		CK45FF1H103Z	CERAMIC	0.010UF	Z
C5	6		CK45FF1H103Z	CERAMIC	2200PF	K
C9	10		CK45FB1H222K			
C11	12		CF92FV1H104J	MF	0.10UF	J
C12			CF92FV1H224J	MF	0.22UF	J
C13	14		CF92FV1H224J	MF	0.22UF	J
C15			CK45FF1H103Z	CERAMIC	0.010UF	Z
C17			CF92FV1H224J	MF	0.22UF	J
C18			CF92FV1H104J	MF	0.10UF	J
C19			CF92FV1H224J	MF	0.22UF	J
C20			CK45FB1H222K	CERAMIC	2200PF	K
C22			CK45FF1H103Z	CERAMIC	0.010UF	Z
			CK45FF1H103Z	CERAMIC	2200PF	K
C23			CF92FV1H104J	MF	0.10UF	J
C24			CF92FV1H224J	MF	0.22UF	J
C25			CF92FV1H224J	MF	0.22UF	J
C26, 27			CE04KW2J221M	ELECTRØ	220UF	6.3W
			CE04KW2A2R2M	ELECTRØ	2.2UF	100W
C28			CE04KW2A4R7M	ELECTRØ	4.7UF	100W
C29			CE04KW1V100M	ELECTRØ	100F	35W
C40			CK45FF1H103Z	CERAMIC	0.010UF	Z
C101			CE04KW1A470M	ELECTRØ	470F	10W
C102			CE04KW1E471M	ELECTRØ	470UF	25W
C103			CK45FF1H103Z	CERAMIC	0.010UF	Z
C104			C91-1439-05	FILM	0.01UF	250VAC
C105-108			CK45FF1H103Z	CERAMIC	0.010UF	Z
C109, 110			CK45FE2H103P	CERAMIC	0.010UF	P
C111, 112			CE04KW1V332M	ELECTRØ	3300UF	35W
C113, 114			CF92FV1H104J	MF	0.10UF	J
C115, 116			C90-1868-05	ELECTRØ	8200UF	80W
C117			CE04KW1A470M	ELECTRØ	47UF	63W
C118			CE04KW1A71M	ELECTRØ	470UF	35W
C119			CE04KW1C331M	ELECTRØ	330UF	16W
C120			CE04KW1C101M	ELECTRØ	100UF	16W
C121			CK45FF1H103Z	CERAMIC	1000PF	K
C122			CE04KW1E470M	ELECTRØ	47UF	25W
C123			CE04KW1A71M	ELECTRØ	47UF	10W
C125			CE04KW1A470M	ELECTRØ	47UF	10W
C151, 152			CE04KW1H2R2M	ELECTRØ	2.2UF	50W
C153			CK45FF1H103Z	CERAMIC	0.010UF	Z
C155-157			CE04KW1A471M	ELECTRØ	470UF	10W
C158			CE04DM1A71M	ELECTRØ	470UF	16W
C159			CE04KW1H2R2M	ELECTRØ	2.2UF	50W
C160, 161			CK45FF1H103Z	CERAMIC	0.010UF	Z
C162			CE04KW1A470M	ELECTRØ	47UF	10W
J1	2B	*	E11-0208-05	PHONE JACK(PHONES)		
J2	1C		E70-0020-05	LOCK TERMINAL BOARD(F.SP)		

L:Scandinavia  
 K:USA  
 T:England  
 X:Australia  
 Y:AAFESE(Europe)  
 P:Canada  
 E:Europe  
 M:Other Areas  
 $\Delta$  indicates safety critical components

\* New Parts

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Les articles non mentionnés dans le Parts No. ne sont pas fournis.

Teile ohne Parts No. werden nicht geliefert.

## No. 11

Ref. No. 参照番号	Address 位置	Parts No. 部品番号	Description 部品名 / 規格	Re- marks 備考
X1 ,2		S51-2078-05	MAGNETIC RELAY(A,B SP, 0W/0FF)	
X1 ,2		S51-2078-05	MAGNETIC RELAY(A,B SP, 0W/0FF)	
X1 ,4		S51-2078-05	MAGNETIC RELAY(C,R SP, 0W/0FF)	
X2		S76-0005-05	MAGNETIC RELAY(H1 +B, 0W/0FF)	
X5		S76-0017-05	MAGNETIC RELAY(H1 +B, 0W/0FF)	
X6		S76-0002-05	MAGNETIC RELAY(POWER, 0W/0FF)	
△ S1	1C	S31-3010-05	SLIDE SWITCH(VOLTAGE SELECTOR)	YM
S2	1D	S31-2094-05	SLIDE SWITCH(IMPEDANCE SELECT)	
D1 -4		HSS104A	DIODE	
D1 -4		ISS131	DIODE	
D10 -13		HSS104A	DIODE	
D10 -13		ISS131	DIODE	
D14		HZ55-1N(B2)	ZENER DIODE	
D14		R05-1ES(B2)	ZENER DIODE	
D15		HSS104A	DIODE	
D15 -19		ISS131	DIODE	
D16 -19		HSS104	DIODE	
D22 -25		ISS133	DIODE	
D22 -25		HSS104	DIODE	
D28 ,29		HSS104	DIODE	
D28 ,29		ISS133	DIODE	
D31		HSS104A	DIODE	
D31		ISS131	DIODE	
D33 ,34		HSS104	DIODE	
D33 ,34		ISS133	DIODE	
D101		HSS104	DIODE	
D101		ISS133	DIODE	
D102		HZ56-2N(B2)	ZENER DIODE	
D102		R06-2ES(B2)	ZENER DIODE	
D103,104		HSS104A	DIODE	
D103,104		ISS131	DIODE	
D105,106		S5688B	DIODE	
D107		HZ515N(B2)	ZENER DIODE	
D107		RD15ES(B2)	ZENER DIODE	
D108		HZ516N(B2)	ZENER DIODE	
D108		RD16ES(B2)	ZENER DIODE	
D110		D358A20F03	DIODE	
△ D111,112		D558A20F03	DIODE	
D113-116		S5688B	DIODE	
D151-153		HSS104	DIODE	
D151-153		ISS133	DIODE	
D156		HZ56-8N(B2)	ZENER DIODE	
D156		R06-8ES(B2)	ZENER DIODE	
D157		HSS104	DIODE	
D157		ISS133	DIODE	
IC1	*	BA12004	IC(7CH TRANSISTOR ARRAY)	
IC2	*	TA7815AP	IC(VOLTAGE REGULATOR/ +15V)	
IC2	*	UPC7815H	IC(VOLTAGE REGULATOR/ +15V)	
IC3	*	BA7626	IC(VIDEO SIGNAL SELECTOR)	
Q1 ,2		2SC4137F19(V,W)	TRANSISTOR	
Q3 ,4		2SC3944A	TRANSISTOR	
Q5 ,6		2SA1535A	TRANSISTOR	
Q7 ,8		2SC2921LB	TRANSISTOR	

L:Scandinavia  
Y:PX(Far East, Hawaii)  
Y:AAFE(S)(Europe)

K:USA  
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X:Australia

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Teile ohne Parts No. werden nicht geliefert.

## No. 12

Ref. No. 参照番号	Address 位置	Parts No. 部品番号	Description 部品名 / 規格	Re- marks 備考
Q9 ,10		2SA1215LB	TRANSISTOR	
Q11 ,12		2SC2431(R,S)	TRANSISTOR	
Q13	*	2SC237F19(V,W)	TRANSISTOR	
△ Q14	*	28A1560LB	TRANSISTOR	
△ Q15	*	25D2340BT	TRANSISTOR	
Q16		2SC2631(R,S)	TRANSISTOR	
Q17 ,18		2SC1845(F,E)	TRANSISTOR	
Q19	*	2SC4137F19(V,W)	TRANSISTOR	
Q20	*	28A1531BT	TRANSISTOR	
△ Q21	*	25D2340BT	TRANSISTOR	
Q22		2SC1845(F,E)	TRANSISTOR	
Q23		28A764	TRANSISTOR	
Q24		2SC2631(R,S)	TRANSISTOR	
Q25		2SA1123(R,S)	TRANSISTOR	
Q26 ,27		2SC1740S(Q,R)	TRANSISTOR	
Q26 ,27		2SC2458(Y,GR)	TRANSISTOR	
Q26 ,27		2SC2785(F,E)	TRANSISTOR	
Q26 ,27		2SC3311A(Q,R)	TRANSISTOR	
Q101,102		2SA1048(Y,GR)	TRANSISTOR	
Q101,102		2SA1175(F,E)	TRANSISTOR	
Q101,102		2SA1309A(Q,R)	TRANSISTOR	
Q101,102		2SA933S(Q,R)	TRANSISTOR	
Q103		2SD2012	TRANSISTOR	
Q103	*	2SD2061	TRANSISTOR	
Q103	*	2SD2374	TRANSISTOR	
Q104		2SA1284	TRANSISTOR	
Q105		2SD863	TRANSISTOR	
Q106		2SC2003(L,K)	TRANSISTOR	
△ Q151,152		2SA999	TRANSISTOR	
SUB - CIRCUIT UNIT (X13 - 6970 - 11)				
C1 ,2		CK45FF1H103Z	CERAMIC	0.010UF Z
C3		C91-0085-05	CERAMIC	0.022UF N
C4		CE04KW1C470M	ELECTRO	47UF 16WV
C5		CK45FF1H103Z	CERAMIC	0.010UF Z
C6		CK45FF1H473Z	CERAMIC	0.047UF Z
C7		CE04KW1H010M	ELECTRO	1.0UF 50WV
C8		CQ92FM1H682J	MYLAR	6800PF J
C9		C91-0769-05	CERAMIC	0.01UF K
C10		CC45FSL1H330J	CERAMIC	33PF J
C11		CE04KW1V100M	ELECTRO	10UF 35WV
C12		CE04KW1H010M	ELECTRO	1.0UF 50WV
C13		CE04KW1HR33M	ELECTRO	0.33UF 50WV
C14		CE04KW1H010M	ELECTRO	1.0UF 50WV
C21 ,22		CQ92FM1H123J	MYLAR	0.012UF J
C21 ,22		CQ92FM1H562J	MYLAR	5600PF J
C21 ,22		CQ92FM1H822J	MYLAR	8200PF J
C23		CE04KW1V100M	ELECTRO	10UF 35WV
C25		CE04KW1V100M	ELECTRO	10UF 35WV
C26 ,27		CK45FF1H473Z	CERAMIC	0.047UF Z
C28		CE04KW1V100M	ELECTRO	10UF 35WV
C29 -31		C91-0769-05	CERAMIC	0.01UF K
C32		CE04KW1A470M	ELECTRO	47UF 10WV
C33		CC45FCH1H270J	CERAMIC	27PF J
C34		CC45FCH1H220J	CERAMIC	22PF J
C35 -38		CK45FB1H471K	CERAMIC	470PF K

L:Scandinavia  
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Y:AAFE(S)(Europe)

K:USA  
T:England  
X:Australia

P:Canada  
E:Europe  
M:Other Areas

△ indicates safety critical components.

△ indicates safety critical components.

## PARTS LIST

### No. 14

x New Parts  
Parts without Parts No. are not supplied.  
Les articles non mentionnés dans le Parts No. ne sont pas fournis.  
Teile ohne Parts No. werden nicht geliefert.

Ref. No. 参照番号	Address 位置	Parts No. 部品番号	Description 部品名/規格	Desti- nation 仕向備考
C170-172		CK45FB1H102K	CERAMIC	
C173		CE04KW1V100M	1000PF K	
C174		CE04HM1H2R2M	10UF 35WV	
C175		NP-ELEC	2.2UF 50WV	
C176		CE04KW1A470M	47UF 10WV	
		ELECTR0	47UF 16WV	
C177-180		CK45FF1H103Z	CERAMIC	
C181-186		CE04FF1H103Z	0.010UF Z	
C187,188		CERAMIC	0.010UF Z	
C189,190		CE04KW1V100M	10UF 35WV	
C191		CK45FF1H103Z	CERAMIC	
		ELECTR0	0.010UF Z	
C192		CK45FSL1H101J	CERAMIC	
C303,304		C91-0749-05	100PF J	
C305,306		CE04FSL1H390J	220PF K	
C307,308		CE04KW1V100M	39PF J	
C309,310		CC45FSL1H221J	10UF 35WV	
C311,312		CE04KW1A101M	CERAMIC	
C313,314		CK45FB1H102K	1000PF K	
C315,316		CQ92FM1H123J	0.012UF J	
C317,318		CQ92FM1H332J	MYLAR	
C319,320		CE04KW1V47M	ELECTR0	
		ELECTR0	4.7UF 35WV	
C321,322		CE04KW1C470M	ELECTR0	
C323,324		CE04FSL1H101J	47UF 16WV	
C325,326		CE04FSL1H221J	0.033UF J	
C327,328		CE04FSL1H470J	220PF J	
C329,330		CE04KW1V100M	47PF J	
C331,332		CE04KW1V100M	10UF 35WV	
C333,334		CE04KW1B470M	ELECTR0	
C335,336		CE04KW1H010M	47UF 25WV	
C337,338		CC45FSL1H221J	1.0UF 50WV	
C339,340		CE04FSL1H470J	CERAMIC	
C341,342		CE04KW1V100M	47PF J	
		ELECTR0	10UF 35WV	
C343		CE04KW1V47M	ELECTR0	
C344		CE04FSL1H104J	4.7UF 35WV	
C345		CE04KW1C101M	0.10UF J	
C346,347		CE04KW1H010M	100UF 16WV	
		ELECTR0	1.0UF 50WV	
J1	1D	B13-0634-05	PHONO JACK(VIDEO I/O)	
J2	2D	E13-0820-05	PHONO JACK(TAPE I/O)	
J3	2D	E63-0035-05	PHONO JACK(CD,PHONO)	
J4	2D	E20-0321-05	LOCK TERMINAL BOARD(ANTENNA)	
	2D	E20-0476-05	LOCK TERMINAL BOARD(ANTENNA)	
CF1,2		L72-0531-05	CERAMIC FILTER	
L1		L72-0536-05	CERAMIC FILTER	
L2		L39-0192-05	COMBINATION COIL	
L3		L40-1091-17	SMALL FIXED INDUCTOR(1UH)	
L3		L30-0496-05	FM IFT(DISCRIMINATOR)	
L4		L30-0498-05	FM IFT(DISCRIMINATOR)	
L5		L30-0497-05	FM IFT(DISTORTION MONO)	
L7		L79-0125-05	LC FILTER	
L8		L30-0467-05	AM IFT	
L9		L79-0790-05	LC FILTER	
L10		L40-1091-17	SMALL FIXED INDUCTOR(1UH)	
L11		L40-1021-14	SMALL FIXED INDUCTOR(1.0mH,K)	
L12,13		L40-1091-17	SMALL FIXED INDUCTOR(1UH)	
X1		L77-1122-05	CRYSTAL RESONATOR(7.2MHZ)	
X2		L78-0295-05	RESONATOR(456KHz)	

L:Scandinavia K:USA P:Canada  
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Y:AAFE(S)(Europe) X:Australia M:Other Areas

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### No. 13

x New Parts  
Parts without Parts No. are not supplied.  
Les articles non mentionnés dans le Parts No. ne sont pas fournis.  
Teile ohne Parts No. werden nicht geliefert.

Ref. No. 参照番号	Address 位置	Parts No. 部品番号	Description 部品名/規格	Desti- nation 仕向備考
C39		CE04KW1C470M	ELECTR0	
C40		CQ92FM1H103J	MYLAR	
C41		CE04KW1H47M	ELECTR0	
C42		CE04KW1H010M	50WV	
C43,44		CE04KW1V100M	1.0UF 50WV	
		ELECTR0	10UF 35WV	
C45,46		CE04KW1V100M	10UF 35WV	
C53,54		CQ92FM1H392J	MYLAR	
C55,56		CQ92FM1H472J	4700PF J	
C57		CE04KW1C470M	ELECTR0	
C62		CE04KW1C470M	47UF 16WV	
		ELECTR0	47UF 16WV	
C63		CE04KW1V100M	10UF 35WV	
C64		CK45FF1H472Z	CERAMIC	
C65		CK45FF1H103Z	CERAMIC	
C66,67		C91-0769-05	0.010UF Z	
C101-106		C91-0749-05	220PF K	
C107,108		C91-0749-05	220PF K	
C109		CC45FSL1H221J	CERAMIC	
C110-112		C91-0749-05	220PF K	
C113		CC45FSL1H221J	CERAMIC	
C114		C91-0749-05	220PF K	
C115,116		CE04KW1H010M	ELECTR0	
C117,118		CE04FSL1H221J	1.0UF 50WV	
C119,120		CE04FSL1H101J	220PF J	
C121,122		CE04KW1V100M	10UF 35WV	
C123,124		CE04KW1H010M	1.0UF 50WV	
C127,128		CC45FSL1H101J	100PF J	
C129,130		CE04KW1V100M	10UF 35WV	
C131,132		CE04KW1H010M	1.0UF 50WV	
C133,134		CK45FB1H102K	1000PF K	
C135,136		CE04KW0J221M	220UF 6.3WV	
C137-140		CC45FSL1H101J	CERAMIC	
C141,142		CE04FSL1H470J	47PF J	
C143,144		CE04KW2A010M	1.0UF 100WV	
C145,146		CC45FSL1M150J	CERAMIC	
C147,148		CC45FSL1H020D	CERAMIC	
C149,150		CC45FSL1H070D	CERAMIC	
C151		CE04KW1H010M	ELECTR0	
C152,153		CC45FSL1H101J	100PF J	
C154		CE04KW1A470M	47UF 10WV	
C155		CC45FSL1H470J	CERAMIC	
C156		CE04KW2A010M	ELECTR0	
C157		CC45FSL1H221J	1.0UF 100WV	
C158		CC45FSL1H470J	CERAMIC	
C159		CC45FSL1H020C	CERAMIC	
		CC45FSL1H221J	220PF J	
C160		CE04KW1H010M	ELECTR0	
C161		CE04KW1H010M	1.0UF 50WV	
C162		CC45FSL1H101J	220PF J	
C163		CE04KW1A470M	47UF 10WV	
C164		CC45FSL1H470J	CERAMIC	
C165		CE04KW2A010M	ELECTR0	
C166		CC45FSL1H470J	47PF J	
C167		CC45FSL1H020C	CERAMIC	
C168		CC45FSL1H221J	220PF J	
C169		CE04KW1C101M	100UF 16WV	

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0: KR - V8040  
5: KR - V8540

4 New Parts

Parts without Parts No. are not supplied.  
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Teile ohne Parts No. werden nicht geliefert.

No. 16

Ref. No. 参照番号	Address 位置	Parts No. 部品番号	Description 部品名 / 規格	Re- marks 備考
IC11		NJM4565D-D	IC(OP AMP X2)	
IC11		RC4565D-D	IC(OP AMP X2)	
Q1		2SC1923(B,θ)	TRANSISTOR	
Q2		2SC1845(F,E)	TRANSISTOR	
Q3		2SC1740S(Q,R)	TRANSISTOR	
Q3		2SC2458(Y,GR)	TRANSISTOR	
Q3		2SC2785(F,E)	TRANSISTOR	
Q3		2SC3311A(Q,R)	TRANSISTOR	
Q4		2SC1740S(Q,R)	TRANSISTOR	
Q4		2SC2458(Y,GR)	TRANSISTOR	
Q4		2SC2785(F,E)	TRANSISTOR	
Q4		2SC3311A(Q,R)	TRANSISTOR	
Q5		2SA1048(Y,GR)	TRANSISTOR	
Q5		2SA1175(F,E)	TRANSISTOR	
Q5		2SA1309A(Q,R)	TRANSISTOR	
Q5		2SA933S(Q,R)	TRANSISTOR	
Q7		2SC1740S(Q,R)	TRANSISTOR	
Q7		2SC2458(Y,GR)	TRANSISTOR	
Q7		2SC2785(F,E)	TRANSISTOR	
Q7		2SC3311A(Q,R)	TRANSISTOR	
Q9		2SC2003(L,K)	TRANSISTOR	
Q10		2SC1740S(Q,R)	TRANSISTOR	
Q10		2SC2458(Y,GR)	TRANSISTOR	
Q10		2SC2785(F,E)	TRANSISTOR	
Q10		2SC3311A(Q,R)	TRANSISTOR	
Q21		2SC1740S(Q,R)	TRANSISTOR	
Q21		2SC2458(Y,GR)	TRANSISTOR	
Q21		2SC2785(F,E)	TRANSISTOR	
Q21		2SC3311A(Q,R)	TRANSISTOR	
Q22		2SA1048(Y,GR)	TRANSISTOR	
Q22		2SA1175(F,E)	TRANSISTOR	
Q22		2SA1309A(Q,R)	TRANSISTOR	
Q22		2SA933S(Q,R)	TRANSISTOR	
Q23	24	2SC2878(B)	TRANSISTOR	
Q25		2SA1048(Y,GR)	TRANSISTOR	
Q25		2SA1175(F,E)	TRANSISTOR	
Q25		2SA1309A(Q,R)	TRANSISTOR	
Q25		2SA933S(Q,R)	TRANSISTOR	
Q26	-29	2SC2878(B)	TRANSISTOR	
Q31		2SC1740S(Q,R)	TRANSISTOR	
Q31		2SC2458(Y,GR)	TRANSISTOR	
Q31		2SC2785(F,E)	TRANSISTOR	
Q31		2SC3311A(Q,R)	TRANSISTOR	
Q33	-36	2SA992(F,E)	TRANSISTOR	
Q37	-40	2SC2631(R,S)	TRANSISTOR	
Q41	42	2SA1123(R,S)	TRANSISTOR	
Q43		2SA1048(Y,GR)	TRANSISTOR	
Q43		2SA1175(F,E)	TRANSISTOR	
Q43		2SA1309A(Q,R)	TRANSISTOR	
Q43		2SA933S(Q,R)	TRANSISTOR	
Q45	46	2SC1845(F,E)	TRANSISTOR	
Q47	48	2SA992(F,E)	TRANSISTOR	
Q49		2SC1740S(Q,R)	TRANSISTOR	
Q49		2SC2458(Y,GR)	TRANSISTOR	
Q49		2SC2785(F,E)	TRANSISTOR	

L:Scandinavia  
Y:PX(Far East, Hawaii)  
Y:AFES(Europe)

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4 New Parts

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Teile ohne Parts No. werden nicht geliefert.

No. 15

Ref. No. 参照番号	Address 位置	Parts No. 部品番号	Description 部品名 / 規格	Re- marks 備考
R6		R014NB2E101J	RD	
R11		R014NB2E470J	RD	
R31		RS14KB30221J	FL-PROOF RS	
R36		R014NB2E101J	RD	
R69		R014NB2E101J	RD	
R181,182		R014NB2E121J	RD	
R187-190		R014NB2E221J	RD	
R209		R014NB2E121J	RD	
R213,214		R014NB2E221J	RD	
R222		R014NB2E121J	RD	
R295,226		R014NB2E221J	RD	
R339		R014NB2E100J	RD	
R342,343		R014NB2E101J	RD	
R346,347		R014NB2E101J	RD	
VR1,2		R12-3686-05	TRIMMING POT(22K)(FM,AM T-LEV)	
VR3		R12-1617-05	TRIMMING POT(2.2K)(SEPARATION)	
VR4	2C	R29-5045-05	POTENTIOMETER(100K)(VOLUME)	
VR5	2C	R05-5041-05	POTENTIOMETER(BALANCE)	
VR6	2C	R10-5045-05	POTENTIOMETER(LOUDNESS)	
S1	2D	S31-2132-05	SLIDE SWITCH(DE-EM,CH SPACE)	YM
D1,2		HSS104	DIODE	
D1		1SS133	DIODE	
D3		HZS5.1N(B2)	ZENER DIODE	
D3		RD5.1ES(B2)	ZENER DIODE	
D4		HZS13N(B2)	ZENER DIODE	
D4		R013ES(B2)	ZENER DIODE	
D10		HZS4.7N(B)	ZENER DIODE	
D11		RD4.7ES(B)	ZENER DIODE	
D11		HSS104A	DIODE	
D11		1SS131	DIODE	
D13		HZS11N(B2)	ZENER DIODE	
D13		R011ES(B2)	ZENER DIODE	
D13		HZS13N(B2)	ZENER DIODE	
D15		R013ES(B2)	ZENER DIODE	
D15		HSS104A	DIODE	
D17		1SS131	DIODE	
D17		HZS13N(B2)	ZENER DIODE	
D19		R013ES(B2)	ZENER DIODE	
D19		HZS11N(B2)	ZENER DIODE	
D21		R011ES(B2)	ZENER DIODE	
D21		HSS104A	DIODE	
D23	-26	1SS104A	DIODE	
D23	-26	1SS131	DIODE	
D27	-33	HSS104	DIODE	
D27	-33	1SS133	DIODE	
IC1		LA1851N	IC(FM/AM MPX SYSTEM)	
IC2		LC7218	IC(PLL SYNTHESIZER)	
IC3		NJM4565L	IC(OP AMP X2)	
IC3		RC4565L	IC(OP AMP X2)	
IC4		TAB409S	IC(MOTOR CONTROL)	
IC5	6	NJM4580D-D	IC(OP AMP X2)	
IC7	8	NJM4565D-D	IC(OP AMP X2)	
IC7	8	RC4565D-D	IC(OP AMP X2)	
IC9		NJU7313L	IC(ANALOG SWITCH)	
IC10		NJU7312L	IC(ANALOG SWITCH)	

L:Scandinavia  
Y:PX(Far East, Hawaii)  
Y:AFES(Europe)

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## PARTS LIST

No. 18

Ref. No. 参照番号	Address 位置	Parts No. 部品番号	Description 部品名 / 規格	Re- marks 備考
C85		CF92FV1H184J	MF	
C86		CC45FSL1H331J	CERAMIC	
C87		C90-3224-05	ELECTR0	J
C88		CC45FSL1H101J	CERAMIC	16WV
C89		C90-3224-05	ELECTR0	J
C90		C90-3224-05	ELECTR0	16WV
C91		C90-3224-05	ELECTR0	J
C92		C90-3224-05	ELECTR0	16WV
C93		C90-3224-05	ELECTR0	J
C94		C90-3224-05	ELECTR0	16WV
C95		C90-3224-05	ELECTR0	J
C96		C90-3224-05	ELECTR0	16WV
C97		C90-3224-05	ELECTR0	J
C98		C90-3224-05	ELECTR0	16WV
C99		C90-3224-05	ELECTR0	J
C100		C90-3224-05	ELECTR0	16WV
C101		C90-3224-05	ELECTR0	J
C102		C90-3224-05	ELECTR0	16WV
C103		C90-3224-05	ELECTR0	J
C104		C90-3224-05	ELECTR0	16WV
C105		C90-3224-05	ELECTR0	J
C106		C90-3224-05	ELECTR0	16WV
C107		C90-3224-05	ELECTR0	J
C108		C90-3224-05	ELECTR0	16WV
C109		C90-3224-05	ELECTR0	J
C110		C90-3224-05	ELECTR0	16WV
C111		C90-3224-05	ELECTR0	J
C112		C90-3224-05	ELECTR0	16WV
C113		C90-3224-05	ELECTR0	J
C114		C90-3224-05	ELECTR0	16WV
C115		C90-3224-05	ELECTR0	J
C116		C90-3224-05	ELECTR0	16WV
C117		C90-3224-05	ELECTR0	J
C118		C90-3224-05	ELECTR0	16WV
C119		C90-3224-05	ELECTR0	J
C120		C90-3224-05	ELECTR0	16WV
C121		C90-3224-05	ELECTR0	J
C122		C90-3224-05	ELECTR0	16WV
C123		C90-3224-05	ELECTR0	J
C124		C90-3224-05	ELECTR0	16WV
C125		C90-3224-05	ELECTR0	J
C126		C90-3224-05	ELECTR0	16WV
C127		C90-3224-05	ELECTR0	J
C128		C90-3224-05	ELECTR0	16WV
C129		C90-3224-05	ELECTR0	J
C130		C90-3224-05	ELECTR0	16WV
C131		C90-3224-05	ELECTR0	J
C132		C90-3224-05	ELECTR0	16WV
C133		C90-3224-05	ELECTR0	J
C134		C90-3224-05	ELECTR0	16WV
C135		C90-3224-05	ELECTR0	J
C136		C90-3224-05	ELECTR0	16WV
C137		C90-3224-05	ELECTR0	J
C138		C90-3224-05	ELECTR0	16WV
C139		C90-3224-05	ELECTR0	J
C140		C90-3224-05	ELECTR0	16WV
C141		C90-3224-05	ELECTR0	J
C142		C90-3224-05	ELECTR0	16WV
C143		C90-3224-05	ELECTR0	J
C144		C90-3224-05	ELECTR0	16WV
C145		C90-3224-05	ELECTR0	J
C146		C90-3224-05	ELECTR0	16WV
C147		C90-3224-05	ELECTR0	J
C148		C90-3224-05	ELECTR0	16WV
C149		C90-3224-05	ELECTR0	J
C150		C90-3224-05	ELECTR0	16WV
C151		C90-3224-05	ELECTR0	J
C152		C90-3224-05	ELECTR0	16WV
C153		C90-3224-05	ELECTR0	J
C154		C90-3224-05	ELECTR0	16WV
C155		C90-3224-05	ELECTR0	J
C156		C90-3224-05	ELECTR0	16WV
C157		C90-3224-05	ELECTR0	J
C158		C90-3224-05	ELECTR0	16WV
C159		C90-3224-05	ELECTR0	J
C160		C90-3224-05	ELECTR0	16WV
C161		C90-3224-05	ELECTR0	J
C162		C90-3224-05	ELECTR0	16WV
C163		C90-3224-05	ELECTR0	J
C164		C90-3224-05	ELECTR0	16WV
C165		C90-3224-05	ELECTR0	J
C166		C90-3224-05	ELECTR0	16WV
C167		C90-3224-05	ELECTR0	J
C168		C90-3224-05	ELECTR0	16WV
C169		C90-3224-05	ELECTR0	J
C170		C90-3224-05	ELECTR0	16WV
C171		C90-3224-05	ELECTR0	J
C172		C90-3224-05	ELECTR0	16WV
C173		C90-3224-05	ELECTR0	J
C174		C90-3224-05	ELECTR0	16WV
C175		C90-3224-05	ELECTR0	J
C176		C90-3224-05	ELECTR0	16WV
C177		C90-3224-05	ELECTR0	J
C178		C90-3224-05	ELECTR0	16WV
C179		C90-3224-05	ELECTR0	J
C180		C90-3224-05	ELECTR0	16WV
C181		C90-3224-05	ELECTR0	J
C182		C90-3224-05	ELECTR0	16WV
C183		C90-3224-05	ELECTR0	J
C184		C90-3224-05	ELECTR0	16WV

L:Scandinavia  
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indicates safety critical components.

No. 17

Ref. No. 参照番号	Address 位置	Parts No. 部品番号	Description 部品名 / 規格	Re- marks 備考
Q49		25C3311A(Q,R)	TRANSISTOR	
Q51		25A992(F,E)	TRANSISTOR	
Q53		25C2651(R,S)	TRANSISTOR	
Q55		25A1123(R,S)	TRANSISTOR	
Q56		25A992(F,E)	TRANSISTOR	
Q58		25C1845(F,E)	TRANSISTOR	
Q60		25A992(F,E)	TRANSISTOR	
DT1		FM FRONT-END ASSY		ET
DT1		FM FRONT-END ASSY		KPYM
DISPLAY UNIT (X14 - 3400 - 10)				
D1 -4		LED		
D14		LED		
C1		C90-1827-05	BACKUP	0.047F
C2		C90-3222-05	ELECTR0	100UF
C3		C91-0769-05	CERAMIC	0.01UF
C4		C90-3219-05	ELECTR0	10W
C5		C91-0769-05	CERAMIC	0.01UF
C6		C91-0769-05	ELECTR0	10W
C7		C90-3256-05	ELECTR0	5.5W
C8		CK45FSL1H1032	CERAMIC	10W
C9		C90-3214-05	ELECTR0	0.01UF
C10		C90-3250-05	ELECTR0	0.33UF
C11		C90-3222-05	ELECTR0	100UF
C12		C91-0769-05	CERAMIC	0.01UF
C13		C90-3224-05	ELECTR0	4.7UF
C14		C90-3250-05	ELECTR0	10W
C15		C90-3222-05	ELECTR0	0.01UF
C16		C91-0769-05	CERAMIC	0.01UF
C17		C90-3224-05	ELECTR0	4.7UF
C18		CC45FSL1H101J	CERAMIC	10W
C19		C90-3254-05	ELECTR0	0.33UF
C20		C90-3224-05	ELECTR0	10W
C21		C91-0769-05	CERAMIC	0.01UF
C22		C90-3224-05	ELECTR0	4.7UF
C23		C90-3254-05	ELECTR0	0.33UF
C24		C90-3224-05	ELECTR0	10W
C25		C90-3254-05	ELECTR0	0.33UF
C26		C90-3224-05	ELECTR0	10W
C27		C90-3224-05	ELECTR0	0.01UF
C28		C90-3224-05	ELECTR0	10W
C29		C90-3224-05	ELECTR0	0.01UF
C30		C90-3224-05	ELECTR0	10W
C31		C90-3224-05	ELECTR0	0.01UF
C32		C90-3224-05	ELECTR0	10W
C33		C90-3224-05	ELECTR0	0.01UF
C34		C90-3224-05	ELECTR0	10W
C35		C90-3224-05	ELECTR0	0.01UF
C36		C90-3224-05	ELECTR0	10W
C37		C90-3224-05	ELECTR0	0.01UF
C38		C90-3224-05	ELECTR0	10W
C39		C90-3224-05	ELECTR0	0.01UF
C40		C90-3224-05	ELECTR0	10W
C41		C90-3224-05	ELECTR0	0.01UF
C42		C90-3224-05	ELECTR0	10W
C43		C90-3224-05	ELECTR0	0.01UF
C44		C90-3224-05	ELECTR0	10W
C45		C90-3224-05	ELECTR0	0.01UF
C46		C90-3224-05	ELECTR0	10W
C47		C90-3224-05	ELECTR0	0.01UF
C48		C90-3224-05	ELECTR0	10W
C49		C90-3224-05	ELECTR0	0.01UF
C50		C90-3224-05	ELECTR0	10W
C51		C90-3224-05	ELECTR0	0.01UF
C52		C90-3224-05	ELECTR0	10W
C53		C90-3224-05	ELECTR0	0.01UF
C54		C90-3224-05	ELECTR0	10W
C55		C90-3224-05	ELECTR0	0.01UF
C56		C90-3224-05	ELECTR0	10W
C57		C90-3224-05	ELECTR0	0.01UF
C58		C90-3224-05	ELECTR0	10W
C59		C90-3224-05	ELECTR0	0.01UF
C60		C90-3224-05	ELECTR0	10W
C61		C90-3224-05	ELECTR0	0.01UF
C62		C90-3224-05	ELECTR0	10W
C63		C90-3224-05	ELECTR0	0.01UF
C64		C90-3224-05	ELECTR0	10W
C65		C90-3224-05	ELECTR0	0.01UF
C66		C90-3224-05	ELECTR0	10W
C67		C90-3224-05	ELECTR0	0.01UF
C68		C90-3224-05	ELECTR0	10W
C69		C90-3224-05	ELECTR0	0.01UF
C70		C90-3224-05	ELECTR0	10W
C71		C90-3224-05	ELECTR0	0.01UF
C72		C90-3224-05	ELECTR0	10W
C73		C90-3224-05	ELECTR0	0.01UF
C74		C90-3224-05	ELECTR0	10W
C75		C90-3224-05	ELECTR0	0.01UF
C76		C90-3224-05	ELECTR0	10W
C77		C90-3224-05	ELECTR0	0.01UF
C78		C90-3224-05	ELECTR0	10W
C79		C90-3224-05	ELECTR0	0.01UF
C80		C90-3224-05	ELECTR0	10W
C81		C90-3224-05	ELECTR0	0.01UF
C82		C90-3224-05	ELECTR0	10W
C83		C90-3224-05	ELECTR0	0.01UF
C84		C90-3224-05	ELECTR0	10W

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 Y:AAFES(Europe)  
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 P:Canada  
 E:Europe  
 M:Other Areas

indicates safety critical components.

\* New Parts

Parts without Parts No. are not supplied.

Les articles non mentionnés dans le Parts No. ne sont pas fournis.

Teile ohne Parts No. werden nicht geliefert.

No. 19

Ref. No. 参照番号	Address 位 置	Parts No. 部 品 番 号	Description 部 品 名 / 規 格	Desti- nation 仕 向
D16		HSS104	DIODE	
D16		1SS133	DIODE	
D18		HZ55.1N(B2)	ZENER DIODE	
D18		R05.1ES(B2)	ZENER DIODE	
D19 -26		HSS104	DIODE	
D19 -26		1SS133	DIODE	
D27		HSS104	DIODE	
D27		1SS133	DIODE	
D28		HSS104	DIODE	
D28		1SS133	DIODE	
D31		HSS104	DIODE	
D31		1SS133	DIODE	
D32		HSS104	DIODE	
D32		1SS133	DIODE	
D41 -49		HSS104	DIODE	
D41 -49		1SS133	DIODE	
D50 .51		HZ513N(B2)	ZENER DIODE	
D50 .51		R013ES(B2)	ZENER DIODE	
E01	1A	11-WT-74CK	FLUORESCENT INDICATOR TUBE	
IC1		CKP50124-139Q	IC(MICROPROCESSOR)	
IC2		NJU3711D	IC(8BIT I/O EXPANDER)	
IC3		TC4028BP	IC(DECODER)	
IC3		XRU4028B	IC(DECODER)	
IC4		P57529C	IC(SYSTEM RESET)	
IC11-22		NJM4565L	IC(OP AMP X2)	
IC11-22		RC4565L	IC(OP AMP X2)	
IC23,24		M5238L	IC(OP AMP X2)	
IC25		NJU7311L	IC(ANALOG SWITCH)	
IC26		TC9213P	IC(2CH ELECTRONIC VOLUME)	
IC27		YSS215-F	IC(DOLBY PROLOGIC)	
IC28		HM5256BLFP-10	IC(S-RAM)	
IC29		NJM78L05A	IC(VOLTAGE REGULATOR/ +5V)	
Q1 .2		2SC1740S(Q,R)	TRANSISTOR	
Q1 .2		2SC2458(Y,GR)	TRANSISTOR	
Q1 .2		2SC2785(F,E)	TRANSISTOR	
Q1 .2		2SC3311A(Q,R)	TRANSISTOR	
Q3		2SA1048(Y,GR)	TRANSISTOR	YH
Q3		2SA1175(F,E)	TRANSISTOR	YH
Q3		2SA1309A(Q,R)	TRANSISTOR	YH
Q3		2SA933S(Q,R)	TRANSISTOR	YH
Q11 ,12		2SC2878(A,B)	TRANSISTOR	
Q13		2SA1048(Y,GR)	TRANSISTOR	
Q13		2SA1175(F,E)	TRANSISTOR	
Q13		2SA1309A(Q,R)	TRANSISTOR	
Q13		2SA933S(Q,R)	TRANSISTOR	
A1	1A	W02-0975-05	ELECTRIC CIRCUIT MODULE	
A1	1A	W02-1046-05	ELECTRIC CIRCUIT MODULE	
A1	1A	W02-1129-05	ELECTRIC CIRCUIT MODULE	

LS:Scandinavia

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X:Australia

M:Other Areas

△ indicates safety critical components.



## SPECIFICATIONS

(For U.S.A. and Canada)

## Audio section

Rated power output at the STEREO operation

120 watts per channel minimum RMS, both channels driven at 8 %, from 20 Hz to 20,000 Hz with no more than 0.03% total harmonic distortions. (FTC)

## Power output at the Surround operation

Front (1 kHz, 0.9% T.H.D. at 8  $\Omega$ ) ..... 75 W+75 W  
Center (1 kHz, 0.9% T.H.D. at 8  $\Omega$ ) ..... 75 W  
Rear (1 kHz, 0.9% T.H.D. at 8  $\Omega$ ) ..... 20 W+20 W

Total harmonic distortion (1 kHz, 8  $\Omega$ ) .. 0.003% at 65 W  
Frequency response

CD ..... 10 Hz-50 kHz, +0 dB, -3 dB

## Signal to noise ratio (IHF-A)

PHONO (MM) ..... 78 dB for 5 mV input

CD, TAPE, VIDEO ..... 100 dB for 200 mV input

## Input sensitivity / impedance

PHONO (MM) ..... 2.5 mV / 47 k $\Omega$

CD, TAPE, VIDEO ..... 200 mV / 47 k $\Omega$

## Tone controls

BASS .....  $\pm 10$  dB (at 100 Hz)

TREBLE .....  $\pm 10$  dB (at 10 kHz)

## Loudness control at -30 dB VOLUME level

..... +8 dB (100 Hz), +2dB (10 kHz) max.

## Video section

## VIDEO inputs / outputs

(Composite) ..... 1 Vp-p / 75  $\Omega$

## S-VIDEO inputs / outputs

(Luminance signal) ..... 1 Vp-p / 75  $\Omega$

(Chrominance signal) ..... 0.286 Vp-p / 75  $\Omega$

## FM Tuner section

Tuning frequency range ..... 87.5 MHz-108 MHz

Antenna impedance ..... 75  $\Omega$  unbalanced

Sensitivity (IHF) ..... 10.8 dBf (0.95  $\mu$ V at 75  $\Omega$ )

## 50 dB quieting sensitivity

MONO ..... 16.2 dBf (3.5  $\mu$ V at 75  $\Omega$ )

STEREO ..... 38.2 dBf (45  $\mu$ V at 75  $\Omega$ )

## Total harmonic distortion at 1,000 Hz

MONO ..... 0.1%

STEREO ..... 0.2%

## Signal to noise ratio at 65 dBf (IHF)

MONO ..... 80 dB

STEREO ..... 74 dB

Selectivity (IHF  $\pm 400$  kHz)

..... 53 dB

## Stereo separation (IHF at 1 kHz)

..... 50 dB

## Frequency response

..... 30 Hz-15 kHz, +0.5 dB, -2.0 dB

## AM Tuner section

Tuning frequency range ..... 530 kHz-1,700 kHz

Usable sensitivity ..... 10  $\mu$ V / (400  $\mu$ V / m)

Total harmonic distortion ..... 0.3%

Signal to noise ratio ..... 50 dB

Selectivity ..... 25 dB

## General

Power consumption ..... 3 A

Dimensions ..... 440 (W)  $\times$  163 (H)  $\times$  415 (D) mm

(17-5 / 16")  $\times$  (6-7 / 16")  $\times$  (16-5 / 16")

Weight (net) ..... 13.9 kg (30.6 lb)

AC outlets ..... switched  $\times 3$ , total 200 W, 1.6 A max.

(For other countries)

## Audio section

Rated power output at the STEREO operation

(IHF '66) from 20 Hz to 20 kHz,

0.06% T.H.D., at 8  $\Omega$  ..... 140 W + 140 W

## Power output at the Surround operation

Front (1 kHz, 0.9% T.H.D. at 8  $\Omega$ ) ..... 75 W + 75 W

Center (1 kHz, 0.9% T.H.D. at 8  $\Omega$ ) ..... 75 W

Rear (1 kHz, 0.9% T.H.D. at 8  $\Omega$ ) ..... 20 W + 20 W

Total harmonic distortion .... (1 kHz, 8  $\Omega$ ) 0.03% at 65 W

## Frequency response

CD ..... 10 Hz - 50 kHz, + 0 dB, -3 dB

## Signal to noise ratio (IHF-A)

PHONO (MM) ..... 78 dB for 5 mV input

CD, TAPE, VIDEO ..... 100 dB for 200 mV input

## Input sensitivity / impedance

PHONO (MM) ..... 2.5 mV / 47 k $\Omega$

CD, TAPE, VIDEO ..... 200 mV / 47k $\Omega$

## Tone controls

BASS .....  $\pm 10$  dB (at 100 Hz)

TREBLE .....  $\pm 10$  dB (at 10 kHz)

## Loudness control at 30 dB VOLUME level

..... 8 dB (100 Hz), + 2 dB (10 kHz) max.

## VIDEO inputs / outputs

(Composite) ..... 1 Vp-p / 75  $\Omega$

## S-VIDEO inputs / outputs

(Luminance signal) ..... 1 Vp-p / 75  $\Omega$

(Chrominance signal) ..... 0.286 Vp-p / 75  $\Omega$

## FM Tuner section

Tuning frequency range ..... 87.5 MHz-108 MHz

Antenna impedance .... 300  $\Omega$  balanced & 75  $\Omega$  unbalanced

Sensitivity (IHF) ..... 10.8 dBf (0.95  $\mu$ V at 75  $\Omega$ )

## 50 dB quieting sensitivity

MONO ..... 16.2 dBf (3.5  $\mu$ V at 75  $\Omega$ )

STEREO ..... 38.2 dBf (45  $\mu$ V at 75  $\Omega$ )

## Total harmonic distortion at 1 kHz

MONO ..... 0.1%

STEREO ..... 0.2%

## Signal to noise ratio at 65 dBf (IHF)

MONO ..... 80 dB

STEREO ..... 74 dB

Selectivity (IHF  $\pm 400$  kHz) ..... 53 dB

Stereo separation (IHF at 1 kHz) ..... 50 dB

Frequency response ..... 30 Hz-15 kHz, + 0.5 dB, -2.0 dB

## AM Tuner section

Tuning frequency range

9 kHz step ..... 531 kHz -1,602 kHz

10 kHz step ..... 530 kHz -1,610 kHz

Usable sensitivity ..... 10  $\mu$ V / (400  $\mu$ V / m)

Total harmonic distortion ..... 0.3%

Signal to noise ratio ..... 50 dB

Selectivity ..... 25 dB

## General

Power consumption ..... 300 W (IEC)

dimensions ..... 440 (W)  $\times$  163 (H)  $\times$  415 (D) mm

Weight (net) ..... 13.9 kg

AC outlets ..... switched  $\times 200$  W max.